Appendix A: Key Personnel Summary

Senior Explosive Technical dsAdvisor- William T. "Billy" Poe, President, Explosive Service International Billy Poe has *over forty (40) years of hazardous materials and explosive experience focusing on demolition, disposal, manufacturing, training, explosive and hazardous material regulatory experience, vent and burn of hazardous materials, as well as, explosives and hazardous materials safety.* He is a graduate of the United States Army-Hazardous Devices School in Huntsville, Alabama (Bomb Technician course). He is qualified in both state and federal court as an expert witness on the aforementioned explosive topics and techniques. He serves as the current President of Explosive Service International (ESI) with over twenty-eight (28) years of business specializing in explosive and hazardous materials work in the United States and abroad. While serving as the Commander of the Louisiana State Police-Hazardous Materials and Explosive Unit, Mr. Poe developed, authored and implemented the State of Louisiana's first hazardous materials regulations under the states "Right to Know" legislation in 1978. Consequently, he authored and implemented the State of Louisiana's first explosive regulations in 1979. He oversaw the enforcement of these explosive and hazardous materials regulations throughout the state during his twenty-two year tenure with the Louisiana State Police.

He developed ESI's Explosive Safety course currently approved by the Louisiana State Police and serves as ESI lead explosive instructor. Mr. Poe holds ESI's Louisiana "Explosive Manufacturer" license, as well as, Federal explosive license as a "Responsible Person". Mr. Poe also holds a forty (40) hour hazardous materials (Hazwoper) certification. He managed a two (2) year multi-million dollar EPA Region VI project to recover hazard class 1.1, 1.3 & 1.4 commercial explosives, military ordnance, smokeless and black propellant powder and fireworks in the aftermath of hurricanes Katrina and Rita.. During this contract, Mr. Poe compiled EPA reports, oversaw field operations and managed ESI Explosive Technicians conducting removal operations of hazardous materials and explosives throughout the state of Louisiana, Mississippi and Texas. He is a critical ESI team member and senior explosive advisor for this project.

Explosive Project/Progrm Manager-William "Jason" Poe, Vice President, Explosive Service International. Jason Poe has *over twenty-two (22) years of explosives and hazardous materials experience* with specific emphasis on commercial and industrial explosive demolition, disposal, marine salvage and hazardous materials remediation, management and emergency response. He is the current Vice President of Explosive Service International, overseeing all explosive projects for the company. His duties include the management of ESI's Louisiana based explosive manufacturing facility. His experience includes in depth experience with explosive regulations (State of Louisiana and Federal-ATFE), as well as, federal and state DOT regulatory experience

regarding hazardous materials. He routinely oversees simultaneous complex explosive projects coordinating operations with ESI's customers. As a Senior Explosive and Hazardous Materials Technician with the Louisiana State Police-Emergency Services Unit (Retired), he managed, remediated and regulated complex hazardous materials incidents as the state of Louisiana's on scene coordinator for hazardous materials. He is a graduate of the United States Army-Hazardous Devices School in Huntsville, Alabama (Bomb Technician course). He enforced the state of Louisiana's explosive regulations as a certified Bomb Technician regulating the commercial explosive industry across the state of Louisiana. He holds ESI's Louisiana Explosive "User" license, as well as, ESI's Federal explosive license as a "Responsible Person". He is a certified forty (40) hour hazardous material technician (Hazwoper) instructor, as well as, Explosive Instructor recognized by the Louisiana State Police to teach ESI's Louisiana explosive safety course. He has conducted and managed numerous on-site explosive disposals through "Open Burn" to include the Explo Systems, Inc. magazine explosion disposal by open burning over 15,000 lbs. of propellant powder at Camp Minden in October 2012, as well as, the open burning of 1,500 lbs. of TNT and Ammonium Picrate for the Louisiana Military Department in August of 2014 at Camp Minden, La. Additionally, his commercial explosive disposal experience also includes emergency response to explosive incidents for various environmental and explosive contractors including United States Environmental Services, USA Environmental and PIKA International in Louisiana and across the United States. Throughout his tenure with the Louisiana State Police and ESI, he has conducted and managed on-site disposal of explosives and hazardous materials around the state of Louisiana for the Louisiana Department of Environmental Quality Louisiana State University, Southern University New Orleans, McNeese State University and The Environmental Protection Agency. He currently serves as one of the two ESI explosive safety consultants for Weston Solutions working under contract for the Environmental Protection Agency (EPA) at Camp Minden, La. He has worked directly for the EPA conducting explosive, propellant and munition remediation operations during hurricanes Katrina and Rita for ESI. Furthermore, as a Manager, Explosive and Hazardous Materials Technician, he has managed ESI's operations on numerous large scale hazardous materials emergency response incidents as a contractor to The EPA. He is listed as an ESI critical team member for this project and will combine his experience with the CERCLA and RCRA experience of the Project Manager (Matthew Salinger) to provide project management for this project.

Project Manager-Matthew Salinger, Environmental Quality Management, (EPA ERRS contractor). *Mr. Salinger has twenty-eight (28) years of experience in the environmental field, managing Environmental Protection Agency (EPA) CERCLA and RCRA sites.* His experience includes 25 years managing groundwater remediation, oil spill cleanup, pesticide warehouse

fire response and remediation, radiation cleanups, anthrax disinfection, dioxin/PCP/creosote removal, secure-landfill construction, lead contamination removal, abandoned drum removal, and hazardous material spills on land and in water. He has worked for the United States Environmental Protection Agency (EPA) ERRS and ERCS contractors for 24 years in EPA Region 6, has been a T&D Coordinator for 3 years, and has been an EPA approved Response Manager for over 20 years. He has extensive experience regarding EPA regulatory requirements and has managed the cleanup of over thirty-five (35) Superfund sites across Region 6. He has directed over 50 engineering, removal, remediation, and O&M projects valued at over $50,000,000. His direct management experience his lead him to supervise field crews ranging in size to 350 people for over 50 projects. He has performed and overseen ambient air monitoring per EPA methods, as well as, prepared the supporting documents. He has supervised all site activities such as: collecting field samples; assuring chain-of-custody; selecting analytical tests and analytical laboratories; organizing and interpreting data used for waste characterization and remedial planning; preparing sampling quality assurance plans; coordinating transportation and disposal of hazardous waste; supervising heavy equipment, operators and laborers; evaluating and selecting subcontractors; managing project costs; preparing all field paperwork; and coordinating with local, state and federal regulatory agencies including USEPA, USDOT, USCG, LDEQ, ODEQ, TCEQ, TGLO, and NMED. Mr. Salinger is also currently 40 hour hazwoper certified. He is considered a Key Person and critical to the successful management of this ESI project. His management experience with management of EPA CERCLA and RCRA superfund sites will be combined with the explosive experience of ESI's Explosive Project Manager (Jason Poe) and Safety Manager (Ken Williams) to provide unprecedented management for this project.

Senior Project Technical Advisor-Bob Hayes, El Dorado Engineering, Inc. Mr. Hayes has *over sixteen (16) years of professional experience with specific emphasis on managing large muti-million dollar turnkey design/build explosive disposal facility projects*. He is the current President of El Dorado Engineering. His expertise includes combustion, thermodynamics, heat transfer and formation and control of emissions. He has extensive experience with burners, furnaces, air handling systems, controls, instrumentation and safety systems at industrial and research facilities. He has conducted numerous process hazards analysis and explosive characterization testing. He performs energetic materials testing, design and implementation of El Dorado's equipment around the world. He has fielded countless El Dorado designed explosive disposal units to include Contained Burn Chambers and Kiln Explosive Waste Incinerators for both private clients as well as the U.S. and foreign allied governments. The development of low NOx burner applications in industrial furnaces and low emission reduction

technologies has been a focus of his career in the explosive industry. He will serve as a Program/Project Manager for the systems engineering scope of this project and is considered a critical member of ESI's team.

Safety Manager - Kenyon Williams, Explosive Service International. Mr. Williams has served as Explosive Service International's (ESI) primary safety manager since his retirement from the United States Army after forty-one *(41) years of explosive safety experience* in 2013. He currently holds both a State of Louisiana Explosive license and Federal Explosive license for ESI. During his tenure with the US Army, he served in many distinguishing roles with the US Army's Technical Center for Explosives Safety (USATCES) to include Associate Director, Chief of the Risk Management Division, Chief of the Development and Production and Program Manager for Underground Testing. Most recently, he supervised three (3) Divisions with approximately 45 employees engaged in professional and technical work of explosives safety, chemical agent, and unexploded ordnance cleanup in support of Head Quarters, Department of the Army. He directly performed tasks that included the Army approval of US Army explosives, chemical agent, and explosives clean-up safety site plans which included many Army demolition and burning grounds operations. Mr. Williams also was appointed by the Army to the Department of Transportation, as the Army Hazard Classifier and was responsible for maintaining the Department of Defense's Joint Hazard Classification System which contains over 20,000 ammunition and explosives items and is used to ship Class 1 materials worldwide. His leadership experience included a position as the US Army alternate Board Member on the Department of Defense Explosives Safety Board (DDESB). In this role, he assisted the DDESB with the promulgation of DOD explosives safety standards such as the DA Pam 385-64 and DOD 4145.26-M making him extremely knowledgeable of the explosives safety and health requirements for ammunition and explosives disposal work. He was also appointed as the as the US Army's Hazard Classifier to the Department of Transportation. Based on his extensive ammunition and explosives experience, he was called on to represent the U.S. Army in support of the U.S. State Department with conducting explosives safety training in Lebanon and Egypt. He was also called on by the DDESB to assist in explosives accident investigations in Ukraine and Tanzania. In addition, he has participated on and led Army investigation teams investigating Army explosives accidents in CONUS.

His directly relevant project experience with open burning of propellant powder is extensive and began with his duty station at Lone Star Army Ammunition Plant in Texarkana, TX. During his tenure at Lone Star Army Ammunition Plant, he was the government safety manager overseeing the safe explosives manufacturing of over two (2) million pounds of Hazard Division

1.1 and 1.3 explosives. His extensive "Open Burn" experience includes supervising the open burning of over 500,000lbs of propellant and pyrotechnic powders and other military explosives annually. In addition to preparing explosives safety site plans for burning ground operations, Mr. Williams has performed Job Safety Analysis, prepared explosives licenses, prepared SOP's identified PPE requirements, conducted safety inspections of operations, monitored air contaminants, performed grounding and bonding tests, investigated explosive accidents and trained worker's on safety and health regarding explosives. At Kwajalein Missile Range, Kwajalein, Marshall Islands, Mr. Williams was a ground safety engineer and part of these duties involved the safe disposal of World War II unexploded ordnance and safely conducting reef blasting operations with demolition explosives. In 2003, Mr. Williams was assigned to a special Army team reviewing explosives operations in Iraq. Based on visiting nine sites in Iraq, Mr. Williams briefed the Commanding General of Central Forces Land Component Command (CFLCC) on the need to establish a special Army team to manage and safely dispose of Captured Enemy Ammunition. Based on this experience, Mr. Williams returned to USATCES and led the development of the Army explosives safety standards for storing Captured Enemy Ammunition which still exists today. Mr. Williams deployed to Afghanistan in 2010, where he functioned as the Explosives Safety Manager for HQ U.S. Forces, Afghanistan, in Kabul, Afghanistan providing technical assistance for disposal operations and visiting numerous Forward Operating Bases to inspect and provide technical assistance for U.S. Army ammunition storage operations. Mr. Williams has extensive explosives disposal through "Open Burn", as, well as, critical explosive safety oversight experience. Mr. Williams "Open Burn" experience will be combined with the experience of the ESI Explosive Project Manager (Jason Poe), Project Manager (Matthew Salinger), Material Removal and Transportation Supervisor (Frank Czjakowski) and Material Disposal Manager (Richard Crain) to provide daily oversight for on-site disposal of explosive materials utilizing open burning in a large scale on a continuous process flow environment. As such, he is listed as a Key Person for this project and his experience makes him a critical member to ESI's team.

Compliance Manager-Michael Hebert, SEMS Inc., Mr. Michael J. Hebert (Compliance Manager) is the Vice President of Construction/Remediation Services for SEMS and is a resident of Louisiana. He received his Bachelor of Science Degree in Construction from Louisiana State University in 1989 and has over *25 years of experience in industrial and environmental services for both governmental and industrial clients.* Mr. Hebert actively manages projects involving environmental construction, waste management, and maintenance activities. Prior to joining SEMS, Mr. Hebert managed the Remediation and Environmental Construction Group for Clean Harbors' South Region (12 state region), was a Senior Project Manager for Shaw Environmental

& Infrastructure Group, was a Regional Project Development Manager for Clean Harbors Environmental Services, was an Operations Manager for Clean Harbors/Laidlaw Environmental, and was a Project Manager for IT Corporation (later acquired by Shaw E&I). Mr. Hebert has extensive experience in the management of remediation and waste management projects including procurement, project controls/cost-schedule, administration/project accounting, evaluation of remedial/waste management alternatives, safety, regulatory compliance, and understanding and implementing technical specifications. Mr. Hebert also has 40 Hour Hazardous Waste Operations (HAZWOPER) Training.

Material Removal and Transportation Supervisor-Frank Czjakowski, Explosive Service International, Mr. Czjakowski is a former US Navy Seal (Warrant Officer 4 retired) with *over forty (40) years of Explosive Experience* both in a combat environment, as well as, the commercial explosive industry. Previous roles and responsibilities include Senior Project and Program Management, Technical Writer, Senior Instructor, Demolition Supervisor, Explosives and Construction Safety Manager. He is qualified as an OSHA 500 Trainer, as well as, currently licensed Louisiana explosive license holder with ESI. He also possesses a current Federal explosive license with ESI and is forty (40) hour hazwoper certified. His relevant work experience includes curriculum development, planning, managing and execution of technical project development for all facets of explosive ordnance disposal, storage and transportation. He has operated in the field for most of his explosive career successfully managing projects that included reactive materials, military and commercial explosives, as well as, military munitions and firing systems. He directly prepared plans, procedures and SOP's for de-mining and disposing of explosives derived from battle area clearance of the Explosive Remnants of War (ERM).

He has Managed over 35 major US Government explosive projects, as well as, many commercial mixed HAZWASTE projects involving unexploded ordnance, explosive constituents and various toxic chemicals. His extensive experience in proper explosive storage configurations, as well as, improper storage configurations in less than ideal conditions is extremely relevant to his assignment for this project. His experience makes him a Key Person on this project and a critical member of the ESI team.

Material Disposal Supervisor-Richard Crain, Explosive Service International

Mr. Crain has over forty-five (45) years of explosive experience specializing in explosive disposal. In 1983 he designed, permitted and developed the first and only permitted Thermal Treatment Storage and Disposal (TSD) Facility for Explosives and Reactive Waste in the United States. He developed explosive disposal techniques and procedures for "Open Burning" that

are currently used by several government and explosive contractors to this day. In 1984 he facility formerly known as R&D Fabricating and Manufacturing Colfax, La (now owned and operated by Clean Harbors Colfax Facility) was issued a TSD permit by the Environmental Protection Agency (EPA). His TSD facility was later issued a permit by the Louisiana Department of Environmental Quality (LDEQ). During his tenure at his TSD facility, Mr. Crain disposed of through "Open Burn" approximately 500,000 pounds of reactive waste, explosives, military propellant powder annually. He also provided explosive disposal services to the Mexican Government outside the United States in Mexico on a large scale basis disposing of thousands of pounds of explosives in Mexico annually over a six (6) year period. He is a senior explosive manager with ESI, as well as, one of ESI's explosive instructors approved by the Louisiana State Police to teach ESI's Explosive Safety course. Mr. Crain is currently licensed with ESI both as a Louisiana explosive license holder, as well as, a federal explosive license holder. His current certifications also include forty (40) hour hazardous material (Hazwoper). He has extensive experience supervising explosively trained personnel and has operated in challenging conditions in the field under less than ideal circumstances around the world. He has successfully managed as many as 250 people simultaneously working on complex explosive projects throughout the United States and abroad. His over forty (40) years of explosive disposal experience is vital to the success of this project. He is listed as a key person and is a critical member of ESI's team.

Environmental Manager, Mr. Brian Sullivan, P.E., SEMS, Brian Sullivan is the New Orleans Branch Manager for SEMS who received his Bachelor of Science Degree in Civil Engineering from Louisiana State University in 1995. He is a Louisiana resident and Louisiana Licensed Professional Civil Engineer (LA 29090) with 19 years of environmental experience. Mr. Sullivan is a U.S. Army veteran of Operation Desert Shield Desert Storm. Mr. Sullivan's military experience included explosives, demolitions, and combat obstacles training and missions. Mr. Sullivan received his Combat Engineer (12 B) training at Fort Leonard Wood, Missouri and his Combat Engineer experience as a part of the U.S. Army's 1st Cavalry Division. He has directed work entailing subsurface investigations, groundwater monitoring, risk assessment, corrective action plan development, air monitoring, hazardous and non-hazardous waste removal, mechanical and civil construction. He has significant experience with Louisiana state environmental contracts including RCRA and CERCLA Sites. Specifically, Mr. Sullivan manages existing contracts for the following sites: Delatte Metals Superfund Site, Bayou Bonfouca Superfund Site, and Madisonville Creosote Works Superfund Site. He is a Certifying Engineer for waste rejection and removal activities at WMI Landfills. Mr. Sullivan previously served as a project manager on commercial and federal remedial projects, emergency oil spill/hazardous

material response and as a response manager on federal remedial projects (Regions 6, 9, and 10 under the U.S. EPA ERRS contract), receiving the only perfect 100 score on his Project Evaluation Report from the USEPA. Other pertinent training/certification includes the following: Response Manager Certification from USEPA; 40 Hour Hazardous Waste Operations (HAZWOPER) Trained; Sergeant (E-5) Combat Engineer, 155th Armor Brigade Mississippi Army National Guard and 1st Cavalry Division of Fort Hood; National Defense Service Ribbon; and Platoon Leader Development Course (PLDC), United States Army, Fort Hood.

Senior Environmental Advisor-Rick Frandsen, P.E., El Dorado Engineering, Inc., Mr. Frandsen has *over twenty-six (26) years of professional experience focused on permitting activities and air modeling for RCRA environmental permits and associated risk assessment.* He has extensive experience in combustion/dispersion modeling and vapor dispersion modeling. He currently serves as the Vice President of El Dorado charged with project management to include the contract executions and milestones. As a manager, he has performed air modeling of stacks, open burning, open detonations and rocket motor firings. He has performed air modeling for potential accidents involving chlorine, MCA and methanol at large chemical facilities. He has also performed air modeling and environment risk assessments for accident involving propellants and explosives involved in storage related incidents. He has overseen the implementation of El Dorado's equipment around the world. His RCRA permitting and modeling experience is crucial to the success of this project. He is considered a critical team member of the ESI team on this project.

Senior Combustion Advisor-Jacob Peart, P.E., El Dorado Engineering, Inc. Mr. Peart *has over fifteen years of professional experience associated with mechanical and combustion processes.* He directed systemization of a 120 million dollar hazardous waste processing facility that included the demilitarization of chemical munition items. He is a lead engineer on the installation of a contained burn system for tactical rocket motors, and has worked on the development of an ISO containerized furnace. He is the holder of six patents, having managed innovative combustion processes for companies. His knowledge and experience with combustion processes are valuable to the success of this project, and he is critical member of ESI's team.

Mechanical Advisor-Morgan Frampton, El Dorado Engineering, Inc. Mr. Frampton serves as El Dorado's main lead mechanical field engineer, and is *highly experienced with all aspects of design and installation for El Dorado's Contained Burn Chambers and Explosive Waste Incinerators.* He has served as a design engineer, project manager, and lead field engineer on complex equipment and systems used for demilitarization and other processing of energetic

materials. His additional demilitarization experience includes Transportable Flashing Furnace design and field engineer for a magnesium recovery and processing plant. He is responsible for combustion and thermal analyses for a contained burn system for tactical rocket motors. His hands-on experience and design knowledge make him a critical member of ESI's team.

Explosive Service International; Explosive Technicians, Explosive Service International, (ESI) Explosive Technicians far exceed the RFP requirements regarding years of experience and operational abilities. Each explosive technician is licensed both with the Louisiana State Police, as well as, the Alcohol, Tobacco, Firearms and Explosives as a blaster and employee possessor. They manufacturer, store and utilize over 200,000 lbs. of explosives annually at our Louisiana based explosive manufacturing facility. Subsequently, "All" ESI explosive technicians have conducted "Open Burn" disposal operations in a field type environment. Our employees safely work with explosives on a daily full-time basis year round. ESI technicians have directly contributed to our twenty-eight (28) years of accident free explosive work. *The average combined experience of our explosive technicians exceeds (15) years of operational explosive experience*. All of our ET's routinely work in harsh, less than ideal conditions on a routine basis. They are self-motivated and routinely work with little to no supervision on complex explosive projects in both a maritime and land based environment. As Louisiana law requires, our explosive technicians are familiar with all State and Federal regulations governing explosives to include safe operations, explosive magazine inventory records and transportation and storage requirements.

Appendix B: Technology Evaluation Summary

Appendix B: Technology Evaluation Summary

Technology Evaluation Summary

As part of our proposal, the ESI/EDE team has included our evaluation of alternative technology methods, other than the open tray burn process, for disposal of M6 propellant stored at Minden, Louisiana. This evaluation is intended to provide the reviewer with a clear view of the rationale our team utilized in selecting the best alternative technology to open burn and a candid discussion of the relative strengths and weaknesses of other considered alternatives.

The criteria used for this evaluation include a criteria compiled from those stated by the client and those considered in the experience of ESI/EDE to be of highest importance for this project. ESI/EDE understanding of and comments on selected criteria topics are discussed below.

Safety: This criteria is of the highest importance, the system must be designed to ensure the safety of the public as well as the workers at the facility. EDE has never had an explosive safety incident causing injury at the numerous facilities designed and provided by our company over our entire company history of more than 33 years specializing in this field. Furthermore, ESI handles hundreds of thousands of pounds of explosives annually and with over twenty-eight years of operational explosive experience, has never had an explosive related accident or injury. This is the most important criteria – ***ensure the safety of personnel and the public***. ESI chose to team exclusively with EDE due to both companies' strong safety record and desire to provide the safest most efficient method to dispose of the M6 and CBI stored at Camp Minden.

Environmental: This criteria encompasses protection of the environment to minimize environmental impacts and potential exposure of harmful elements to human, flora, and fauna. This includes meeting applicable standards as well as minimizing emissions to levels that are as low as reasonably possible. EDE has extensive experience with pollution abatement technologies, including providing systems to treat M6 in Europe while meeting applicable European environmental standards which are more stringent than U.S. standards. The primary consideration is a good understanding of what is technically feasible versus cost. EDE has the required expertise to understand how to maximize protection of the environment within a finite budget, with a knowledge regarding the points at which additional investment results in drastically diminishing returns. EDE will not attempt to sell equipment that is not needed, but can provide systems which remove emissions of potential concern to the lowest level which is technically achievable, far exceeding any regulatory requirements, if desired by the client.

Another key environmental concern is residual or remaining converted materials. We do not view technologies favorably which simply trade one environmental problem for another. For example, converting an air pollution problem to a water pollution problem is not consistent with our design philosophy. A big picture view of the fate of all the materials is necessary to protect the environment and limit public exposure.

Regulatory Standards: The system must meet the necessary federal, state, and local requirements, and be accepted by project stakeholders including the State of Louisiana (LDEQ, National Guard, Deptartment of Health, State Police, Homeland Security), DDESB, and EPA. A key advantage is selection of a technology that can be readily permitted and avoid schedule delays for construction, start up, and operations, due to permitting or regulatory constraints.

Technical Viability: The technology must be sound and proven, providing the capability for effective treatment of the materials at throughput rates necessary to do the job. EDE has fielded many proven workhorse systems and has also witnessed the squandering of public funds on unsuccessful science projects. We have been hired on numerous occasions to conduct feasibility assessments and look at reasons why other technologies are not performing well. This background allows us to understand the difference between well proven technology and things that sound good on paper but are riddled with potential pitfalls.

Schedule: The urgency of this project is a key driver, timely completion of this project is best assured by providing a technology that is not overly complex, is well proven, and has the most straight forward path for construction and permit approvals. The achievable throughput of the facility directly determines the completion timeline.

Cost: The systems must be affordable so the project can be completed. The primary drivers of cost are the required system throughput and extent of pollution abatement technology applied. Any system can process the workload in less time by increasing the cost and building duplicate or larger facilities.

Any alternative to open burning will be a higher cost and likely a longer timeframe for completion. The selected technology must meet the right balance to provide capability to complete treatment of the workload in an acceptably short time period and at an acceptably affordable cost so that the environmental and safety benefits of the selected technology can be realized by the public and the environment.

Since their inception in 1981, EDE has been a leader in demilitarization technology, with unmatched direct experience in developing, designing, and fielding systems which have proven successful to meet the needs of their many clients, including numerous U.S. DOD installations, commercial clients, foreign ministries of defense, and NATO. EDE has also been highly involved in the demilitarization community, attending, chairing, and presenting at annual and biannual international demilitarization conferences and symposiums. During these conferences and symposiums, virtually all of the technology and approaches for treatment and disposal of energetic materials and munitions have been presented. Many alternative technologies upon testing or scaling up have proven to be unfeasible. EDE is aware of the wide variety of approaches which have been applied in the industry, including those which have worked well and those which have not worked well, and some of the details of the challenges experienced with each method.

Due to the breadth and depth of their experience, EDE is also frequently hired as a consultant to perform such evaluations for our clients, including various U.S. Departments of Defense and Federal Agencies, foreign governments and ministries of defense, and international organizations such as the United Nations and NATO.

Prior to receiving the request for proposal for alternative disposal methods to open burning sent to ESI on February 11, 2015, by General Curtis of the Louisiana Military Department, ESI tasked EDE to perform a similar evaluation to select the best non-open burning technology for the Minden M6 and CBI disposal project. Listed below are the technologies and methods

considered in the EDE evaluation as potential closed disposal alternatives to open burning, followed by a brief description of each method.

Technologies:

1. Contained Burn
2. Rotary Kiln/EWI
3. EDE Kiln
4. Other Static Kilns
5. Tunnel Furnace
6. Modified Asphalt Kiln
7. Pyrolysis Process
8. Static Detonation Chamber
9. Contained Detonation Chamber (CDC , "Donovan Chamber")
10. Detonation of Ammunition in Vacuum Integrated Chamber (DAVINCH^{TM})
11. Conversion to other products by Chemical or Biological Processes
12. Super Critical Water Oxidation (SCWO)
13. Plasma Arc
14. Recycling
15. Off-site Disposal

1. CONTAINED BURN. This technology can be visualized as open burning "indoors" followed by scrubbing of exhaust gases. Energetic materials are placed onto a loading system, for remote control loading into a large chamber which contains sufficient air for combustion. The chamber is then closed and the materials are ignited remotely by the operator. The products of combustion are contained in the chamber. A valve is then used to meter the products of combustion through a pollution abatement system tailored to remove emissions of concern. The enclosed chamber is then purged with fresh air for the next firing cycle. A cold burn tray with the next load is placed onto the automated load system (operators do not need to enter the chamber) and the cycle is repeated. This technology is best suited for thermal treatment of materials which readily undergo complete combustion following ignition, generally well suited for materials which are normally treated via open burning.

   Advantages
   - Capable of very high throughput rates
   - Can handle large batch loads, minimizing up front handling requirements
   - Highly versatile with respect to load size
   - Burn conditions and pollution abatement equipment operations are checked and monitored before release (hold, test, release is achievable).
   - Approved by DDESB
   - Not classified as an incinerator
   - Successfully permitted under RCRA subpart X at multiple sites

Disadvantages

- Not designed for detonation of full up high explosive filled munitions (grenades, projectiles, etc.)

Applications

Contained burn is a well proven technology that EDE has used for projects ranging in size from small units used to dispose of commercial companies' off spec waste items, including bulk propellants and explosives contaminated materials, up to large scale projects such as tactical rocket motor disposal for the U.S. military. This technology has been applied to nitrocellulose based propellants as well as more challenging propellant types such as AP/aluminum based propellants, and older azide based airbag propellants. Millions of pounds of propellant have been processed through existing contained burn facilities in the U.S. All have been permitted under RCRA subpart X.

This type of technology is applied at an industrial commercial demilitarization facility in Missouri with specific design features to thermally treat AP propellant from aged MLRS rocket motors as part of a large scale commercial demilitarization contract.

This approach was selected via a comprehensive feasibility study and technology evaluation for application to demilitarize a wide variety of tactical rocket motors with aging propellant for the U.S. Army. The contained burn facility that EDE is currently constructing at Letterkenny Army Depot for tactical rocket motors has successfully received all the necessary environmental permits and DDESB approval for processing up to 800 lbs. of propellant per firing cycle. It is designed to operate at 2-3 cycles per hour. This throughput rate is consistent with what is understood to be required for Minden. The facility at Letterkenny includes treatment of Ammonium Perchlorate and aluminum propellant with rubberized binder materials. The major products of combustion of AP/Al propellant includes extremely large quantities of hydrochloric acid and fine particulate matter, so that application is much more challenging from a technical standpoint than M6 propellant at Minden, which has harmless major combustion products (H_2O, CO_2) and only produces products of potential concern (CO, NOx, VOC's, PM) as minor potential products. Full scale validation testing was completed at China Lake Naval Weapons Center for large intact tactical rocket motors which successfully demonstrated the loading system, ignition system, and pollution abatement system.

This technology can be directly applied at Minden at a scale similar to what was demonstrated at China Lake and is being fielded at Letterkenny. The pollution abatement system can be tailored according to cost with very well proven technology backed by test data for treatment of off gases from M6 propellant combustion. The pollution abatement system can range from the minimum required to meet regulatory standards (much cleaner than open burning) to the maximum achievable (which well exceeds applicable standards) with >>99% removal of CO, VOC, and PM, and >90% removal of NOx. The loading system can accommodate burn trays filled with propellant

similar to open burning operations or it can be loaded directly with unconfined boxes, drums, and super sacks, such as currently stored at Minden, to reduce handling requirements and personnel exposure/risk.

2. ROTARY KILN/EWI. The Rotary Kiln/EWI is the workhorse of the demilitarization industry. Materials are fed semi continuously via specially designed feed systems into a thick walled, armored rotary kiln. The design of the kiln with internal spiral flights (Archimedes screw) conveys the materials from the cold feed end to the discharge end which is heated by a burner. Materials react in the center of the kiln via burning or detonation. The internal flights prevent detonation propagation between loads. For M6 the propellant is loaded into small combustible cardboard boxes for semi-continuous feeding through a standard positive feed system. The pollution abatement system can be tailored according to cost with very well proven technology backed by test data for treatment of off gases from M6 propellant combustion. The pollution abatement system can range from the minimum required to meet regulatory standards (much cleaner than open burning) to the maximum achievable (which well exceeds applicable standards) with >>99% removal of CO, VOC, and PM, and >90% removal of NOx.

   This has been historically the U.S. Army's thermal treatment system of choice for conventional and chemical munitions due to its performance, throughput, and versatility.

   This forms the core capability at most military conventional munition demil facilities as well as most commercial conventional munition demil facilities worldwide.

   EDE has designed and installed several of these systems worldwide, more than any other company. It is highly versatile for both detonable items such as small arms, including up to 20 mm HEI; it is also used for processing bulk propellant and explosives. The system can dispose of small arms ammunition at extremely high rates > 20,000 rounds per hour, while discharging decontaminated steel, brass, and lead, segregated for recycling.

   The EDE EWI uses a positive feed system for processing bulk propellant and bulk explosives, and has successfully disposed of this material for many years at many locations. This includes the recent commissioning of a facility for Belgium MOD which processed M6 propellant with the lowest emissions of CO, VOC, PM and NOx achieved by any incineration facility worldwide. This type of facility has been approved by DDESB at many U.S. locations. It is typically permitted as an incinerator (Subpart EEE) which can be a more difficult and time consuming regulatory pathway. The current standard configuration, has a maximum disposal rate less than 500 pounds/hr, so it would require multiple units to complete the Minden workload in the desired timeframe, or a design revision to increase the achievable throughput rate for bulk propellant. The standard positive feed system requires preparing the material to feed in 11 pound or less increments, which increases handling requirements.

Advantages

- Extremely versatile for a wide variety of munition types (SAA, fuzes, Cads/Pads, bulk HE, bulk propellant, 20mm, sawed projectiles)
- High throughput rates
- Can handle munitions which detonate if they are smaller than 30mm HE
- Approved by DDESB
- Successfully permitted (as incinerator) at multiple sites
- Low cost, high versatility
- Recent demonstrated M6 propellant disposal in Belgium with excellent pollution abatement

Disadvantages

- Requires unpacking of material from current storage containers and repackaging into smaller containers
- Throughput rate is lower than ideal for Minden; design modification or multiple units would be required to achieve higher throughput rates
- Standard positive feed system requires more handling than contained burn
- Not suited for detonation of large intact HE filled projectiles >30mm
- Hazardous waste incinerator permit is typically a more difficult and time consuming regulatory pathway

3. El Dorado Engineering (EDE) KILN. This kiln is a furnace designed specifically to dispose of bulk propellants and explosives. Materials are semi-continuously fed through a specially designed automated feed system designed to reduce personnel handling. The material is fed into an insulated furnace which is initially heated with a burner, then maintains temperature via feeding of propellant, similar to the rotary kiln. Exhaust gases are continuously drawn through a pollution abatement system that is identical to the rotary kiln.

   This type of system has been successfully fielded at several locations and has been used to process bulk propellant and explosives. It has the potential to achieve high throughput at relatively low capital cost. The EDE feed system was approved by DDESB for feeding of flare composition materials at a Navy site. The EDE kiln itself has also been fielded at multiple DOD sites, with DDESB approval. The kiln will have some design features that optimize throughput for M6.

   Advantages

   - Capable of very high throughput rates
   - Specialized for bulk propellants
   - Potentially lower cost than other alternatives
   - Proven feed system minimizes personnel handling
   - Proven feed system mitigates risk of flame initiation and propagation

Disadvantages

- Requires unpacking of propellant – cannot treat propellant in packages

4. OTHER STATIC KILNS. There are a few static kilns which have been fielded by others in Europe to burn bulk propellant materials. None are known to have DDESB approval or have feed systems or furnace systems which have been sited and operated at DOD installations. Safety concerns involving the feed system, the kiln, and associated barricades are critical to ensure personnel and equipment are protected during normal operations and in the event of unplanned incidents and failures. Some of these systems have catastrophic risk due to single point failures which can result in unacceptable risk to personnel or the facility. Whenever EDE evaluates these type of systems they typically find that the kiln is not designed to minimize the effects of an explosion, that barricading is suspect, and that redundant safety features or interlocks must be added to reduce risk.

   Advantages

   - Capable of very high throughput rates
   - Used for bulk propellants
   - Potentially lower cost than other alternatives

   Disadvantages

   - Requires unpacking of propellant – cannot treat propellant in packages
   - Often have inferior design to minimize risks compared to DDESB reviewed systems

5. TUNNEL FURNACE. This type of furnace is adapted from the heat treating industry. It has been used at demilitarization plants to decontaminate metal parts and burn contaminated waste that is difficult to downsize and feed into other systems. Materials are fed in a batch mode, or semi-continuously via a conveying system which carries the materials through a hot furnace which is heated by a burner. Exhaust gases are continuously drawn through a pollution abatement system.

   EDE has experience with this type of system, however do not consider it particularly well suited for bulk propellants. The system uses moving steel parts in the furnace hot zone, which results in more maintenance and downtime. For bulk propellant there are particular concerns with propagation outside the furnace and required airlock systems to prevent fugitive emissions. This type of system has difficulty with high throughput of exothermic materials without creating untreated exhaust leaks out of the furnace.

   Advantages

   - Used for burning contaminated waste and decontaminating metal parts
   - Good for treating loads which are difficult to downsize (decontaminating large metal parts)

Disadvantages

- Requires unpacking of propellant
- Moving parts in hot zone results in maintenance challenges
- Typically higher cost than other technologies
- Has potential for burning outside the furnace

6. MODIFIED ASPHALT KILN. The modified asphalt kiln design modifies existing well known equipment to adapt it to processing energetic material. It offers a relatively low cost solution. Although many of the elements of the design are sound, it is unproven technology for this application and does not have DDESB approval nor a track history of successful operation on explosives or propellants.

   Advantages

   - Potentially capable of very high throughput rates
   - Potentially lower cost than other alternatives

   Disadvantages

   - Requires unpacking of propellant
   - Not approved previously by DDESB
   - Less versatile than other technologies
   - Feed system and kiln would require extensive hazards analysis to ensure design is safe for propellant handling

7. PYROLYSIS PROCESSES. There are some processes which use pyrolysis to convert solid materials to a vapor for downstream oxidation via an afterburner or catalyst. These processes sometimes claim to have advantages as non-incineration alternatives. However, in reality, pyrolysis of propellant, which already contains oxygen, only really generates large quantities of CO and hydrocarbons which are of serious concern from both a toxicity standpoint and an explosive atmosphere perspective. Pyrolysis of propellant and explosives which contain oxidizer essentially is an extremely inefficient and very poor combustion process. It is far better, in our design philosophy, to promote efficient combustion and very complete oxidation and destruction of reactive and toxic compounds in the initial combustion process and then scrub trace quantities (ppm) of CO or hydrocarbons remaining, instead of intentionally creating huge quantities of toxic and explosive vapors for subsequent treatment.

   Advantages

   - Sometimes perceived as alternative to incineration

   Disadvantages

   - Requires unpacking of propellant

- Creates large amounts of toxic and reactive species to be oxidized downstream
- Higher risk from both environmental and safety standpoint

8. STATIC DETONATION CHAMBER. The static detonation chamber (SDC) produced by Dynasafe consists of an electrically heated chamber with energetic materials being conveyed into the chamber on a batch or semi-continuous basis where they detonate or burn. The chamber has interior armor plating to allow relatively large munitions such as 90 mm projectiles to be processed directly without disassembly. The exhausts are passed through a pollution abatement system. This system is being used successfully at several locations around the world. The static detonation chamber has major advantages over other systems when processing large munitions that will detonate. Although it can process bulk material, the demonstrated throughput rate is limited (<200 lbs per hour), typically well below that of the rotary kiln method. At Minden it would require multiple units or major design revisions to increase throughput. For M6 propellant, the propellant would have to be removed from the existing packaging and fed in smaller incremental batches. It has been permitted and has DDESB approval for limited throughput rates.

   Advantages
   - Extremely versatile for a wide variety of larger munition types
   - Can handle munitions which detonate > 30mm HE
   - Approved by DDESB
   - Successfully permitted (under RCRA subpart X) at a site in the U.S.

   Disadvantages
   - Throughput rate for bulk materials is much lower than ideal for Minden (much lower than rotary kiln systems); multiple units would be required
   - Higher cost than rotary kiln
   - Would require more handling up front than contained burn

9. CONTAINED DETONATION CHAMBER (CDC or "Donovan" chamber). This detonation chambers was developed to dispose of munitions by detonating them in a chamber via use of donor explosives. This technology is designed as a closed disposal alternative to open detonation operations, which is a method used for items which are most safely disposed of via detonation. Donovan and CH2M Hill has provided this type of equipment for both chemical munitions and conventional munitions. EDE assisted Donovan with design of the pollution abatement system and CH2M Hill with the detonation tests to gain DDESB approval. Although these systems have been permitted and have DDESB approval, they are not used to process large quantities of bulk energetic materials.

   Advantages
   - Extremely versatile for a wide variety of munition types

- Can handle large detonations > 40 lbs NEW.
- Approved by DDESB
- Successfully permitted (under RCRA subpart X) at a site in the U.S.

Disadvantages

- Throughput rate for bulk materials is far too low to be practical
- Not designed for treatment of bulk explosives
- Donor material to detonate M6 would be impractical
- Requires personnel entry in to the chamber

10. DAVINCH. This detonation chamber was developed by KOBE STEEL to dispose of munitions by detonating them in a chamber via use of donor explosives. This technology is designed as a closed disposal alternative to open detonation operations, which is a method used for items which are most safely disposed of via detonation. KOBE has provided this type of equipment for both chemical munitions and conventional munitions. This technology utilizes an integrated vacuum system to create a vacuum in the chamber prior to detonation to increase capacity. Although these systems have been permitted and have DDESB approval, they are not used to process large quantities of bulk energetic materials.

    Advantages

    - Extremely versatile for a wide variety of munition types
    - Can handle large detonations > 50 lbs NEW.
    - Approved by DDESB
    - Has hold, test, release capability

    Disadvantages

    - Throughput rate for bulk materials is far too low to be practical
    - Not designed for treatment of bulk explosives
    - Donor material to detonate M6 would be impractical
    - Requires personnel entry in to the chamber
    - Detonation in the absence of oxygen creates more CO and VOC products upstream of the PAS

11. CONVERSION TO OTHER PRODUCTS BY CHEMICAL OR BIOLOGICAL PROCESSES. There have been several biological (Actodemil) and chemical (Hydrolysis) processes that have been used to degrade explosive or convert energetic materials into different materials. None have been demonstrated to complete the destruction and disposal of the quantity of materials at Minden in the short timeframe required. There are concerns with each of these processes regarding cost effectiveness, handling of chemical reagents (strong bases or acids), and the creation of large quantities of potentially contaminated

secondary waste streams. Some hydrolysis processes create hydrolysate which requires further treatment through a SCWO (See below).

Advantages

- Sometimes marketed as "recycling" of material
- Some experience at small scale with propellant; M6 experience unknown

Disadvantages

- Requires unpacking of propellant
- Purchase and handling of large amounts of chemical reagents
- Creates huge mass of effluent which may be a contaminated secondary waste
- Value as fertilizer is skeptical due to legitimate concerns about contamination
- Not well proven at scale

12. SUPER CRITICAL WATER OXIDATION (SCWO). SCWO is an underwater high pressure oxidation process technology that has been used in applications for chemical munitions disposal. It is understood that some small scale testing has been performed on bulk propellants. It is likely that multiple SCWO units would be required to achieve required throughput which would be a major scale up compared to small scale testing. This technology, although not without potential, is considered to have significant technical risk and is not considered to be well proven enough to field this technology as a stand-alone solution for Minden. Concerns include the required preparation steps to prepare the propellant for slurry feeding in to the SCWO as well as potential contamination of the large amounts of liquid waste generated.

    Advantages

    - Potential to produce very little NOx, CO and THC
    - Some experience with bulk propellant
    - Considered as alternative to burning or incineration with generally less public resistance

    Disadvantages

    - Requires unpacking of propellant
    - Propellant must be ground underwater to provide slurry feed (additional complexity, maintenance, risk)
    - Creates huge mass of discharge water, with potential contamination concerns
    - Not known to be well proven for M6

13. PLASMA ARC. The plasma arc furnace is a device used to create low temperature plasma flow created by an electric arc. Although it has been tested on various energetic materials, it has not been successfully used on large scale propellant disposal projects, and is not a viable alternative for this project.

14. RECYCLING. Both EDE and ESI have extensive experience recycling energetic materials. Recycling is not considered viable due to the difficulty of securing a buyer for the materials. The material storage problem at Minden is a direct result of speculative storage for resale. That experience shows there is no market for this material. If the material was TNT based, the recycling options would be much broader than for M6 propellant. Even with a buyer, a new set of challenges and dangers to personnel and the environment are introduced when attempting to transport the aged M6 propellant as discussed in detail below.

15. OFF-SITE DISPOSAL. EDE does not believe that off-site disposal should be considered for several reasons. It is judged to be less safe than treating on-site as the M6 material would all have to be repackaged in suitable DOT packaging to be shipped off-site. This requires considerable material handling and direct personnel exposure to safety hazards. The propellant loaded trucks would have to pass through roads, highways, and neighborhoods to the final destination. EDE knows of only two facilities in the U.S. with potential to take this workload. The first is a General Dynamics owned facility located in Joplin, Missouri. They are currently working on government contracts for disposing of government materials and would not likely have capacity for immediate disposal. Also, they use the Rotary Kiln/EWI technology with low throughput, therefore it would take several years to process. The other facility is Clean Harbors' open burn facility. It does not make good sense to repackage and haul this material away for open burning at another location if the public objects to open burning this material. Overseas options increase the transportation costs and result in increased risk of environmental contamination while also resulting in increase overall exposure of people to explosive hazards. Packaging the material underwater for transport will result in another pathway for environmental contamination via contaminated water.

Closed Disposal Technology	Proven Feed System For Bulk Propellants (Yes/No)	Proven Treatment System For Bulk Propellants (Yes/No)	Proven Pollution Control System For Bulk Propellants (Yes/No)	Feed System Installed at DOD site with DDESB site approval (Yes/No)	Treatment System Installed at DOD site with DDESB site approval (Yes/No)	Subpart X Permit Applicable (Yes/No)	Protection of Personnel and Risk Reduction (1-10 Rating)	Protection of the Environment (1-10 Rating)	Long-Term Effectiveness and Permanence (1-10 Rating)	Reduction of Toxicity, Mobility, and Volume (1-10 Rating)	Short-Term Disposal Rate (1-10 Rating)	Cost (1-10 Rating)	Likely Community Acceptance (1-10 Rating)
1) Contained Burn	Y	Y	Y	Y	Y	Y	10 [1]	9 [5]	10	10	10	7	9
2) Rotary Kiln/EWI	Y	Y	Y	Y	Y	TBD [6]	7	9 [5]	10	10	6	5 [4]	9
3) EDE Kiln	Y	Y	Y	Y	Y	N [5]	8	9 [5]	10	10	10	9	9
4) Other Static Kilns	Y	Y	???	N	N	N	7	7	10	10	10	10	7
5) Tunnel Furnace	???	???	???	N	N	N	7	7	10	10	9	10	9
6) Modified Asphalt Kiln	N	N	N	N	N	N	7	5	10	10	10	10	7
7) Pyrolysis Process	???	???	???	N	N	Y	5	4	10	5	8	5 [4]	7
8) Static Detonation Chamber (SDC)	Y	Y	Y	Y	Y	Y	8	8	10	10	4	5 [4]	5
9) Contained Detonation Chamber	Y	N	N	Y	Y	Y	8	8	10	10	2	2 [3]	5
10) DAVINCH	Y	N	N	Y	Y	Y	8	8	10	10	2	2 [3]	5
11) Conversion	Y [7]	Y [7]	NA	Y	Y	Y	6	5	5	2	2	???	9
12) SCWO	Y [7]	Y [7]	Y [7]	Y	Y	Y	8	5-10 [2]	5-10 [2]	5 [2]	5	5 [4]	10
13) Plasma Arc	N	N	N	Y	Y	Y	5	7	8	8	2	2	5
14) Recycling	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	NA	10
15) Off-Site	NA	NA	NA	NA	NA	Y	4	6 [3]	5	5	6	2	???

Notes Scale 1-10 (10 being best)

1 Significant risk reduction in reducing handling of propellant by not removing from existing packaging

2 Depends on amount and contamination of water discharge; has the potential to produce very little air emissions

3 Dependent on eventual disposal process

4 Multiple units required to meet throughput – drives up cost

5 Identical to what was proven in Belgium on M6 propellant

6 This type of system has been approved as both a Subpart X unit and as an incinerator

7 Limited testing performed on similar materials

Appendix C: El Dorado Engineering, Inc. Relevant Projects

El Dorado Engineering, Inc.

DOD Customers: JMC & Anniston Army Depot

Project Name: Transportable Flashing Furnace

Project Location: Talon, WV

Project Dates: 2008

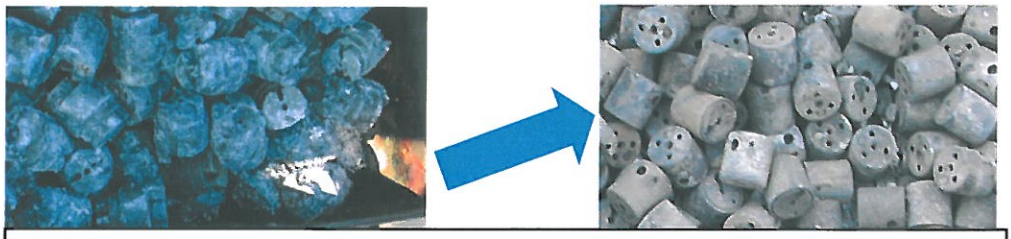
Client Contact: Phil Keith, 812-854-6157

Project Summary

This project is very similar to Minden in that a contractor was tasked to dispose of explosive items. The contractor sold some high value materials but improperly stockpiled tons of hazardous explosive material which was never destroyed. Like Minden, the site was abandoned with many tons of explosive materials left in haphazard, unsafe conditions. After spending millions of dollars trying other companies and alternative technologies that failed, the Army turned to EDE to provide the technology that worked to clean up the site.

EDE had previously provided a Transportable Flashing Furnace (TFF) to Anniston Army Depot. EDE was contracted to provide a new, larger TFF for this location to flash explosive contaminated materials from their missile recycling facility. EDE designed, fabricated, and installed a new, larger TFF capable of flashing up to 5,000 pounds per hour of explosive contaminated materials. EDE trained the Anniston operators in the use of this equipment.

The smaller TFF originally used at Anniston was refurbished and sent to West Virginia to be used in the cleanup and restoration of the old Talon site. The furnace was used to process a wide variety of live items including fuses, detonators, leads, etc. EDE was also tasked to provide assistance with explosive chemistry, combustion analyses, and anticipated air emissions used to secure the environmental permits for the operation. EDE also designed and provided strongboxes for the project, installed the furnace, and trained the operators. This operation at Talon was very successful as the Mobile Ammunition Renovation Inspection Demilitarization (MARID) team was able to process the entire workload in less than 6 months by operating two 10-hour shifts per day.



Hazardous materials were safely and successfully thermally treated to remove explosive and toxic hazards resulting in materials which were safe and clean.

El Dorado Engineering, Inc.

DOD Customers:	Belgium Ministry of Defense
Project Name:	Belgium EWI and PAS
Project Location:	Zutendaal, Belgium
Project Dates:	2013
Client Contact:	Pascal Gora, 9-2374-8250

Project Summary

El Dorado Engineering, Inc. (EDE) was selected in an open worldwide competition to provide an Explosive Waste Incinerator (EWI) facility for Belgium Ministry of Defense. The turnkey project included all design, fabrication, installation, training and startup. This included the EWI and an advanced Pollution Abatement System (PAS) to meet European Regulations. The Belgium MOD had a workload consisting of bulk propellant, explosives, and various types of ammunition, some remaining from World War II and earlier.

The PAS was a state-of-the-art facility that not only met the very stringent EU regulations, but also removed NOx to the lowest emissions ever achieved for thermal treatment of propellants and explosives by using an EDE developed system with both NSCR (non-selective catalytic reduction) and SCR (selective catalytic reduction) operating in series. The facility acceptance testing was very successful, including the successful treatment of M6 propellant and red bag packaging at the required throughput rates, while demonstrating emissions which were far below the required standards.

Belgium invited dignitaries from throughout the world to view the system and had a ribbon cutting ceremony in September 2013.

El Dorado Engineering, Inc.

DOD Customers:	Confidential Commercial Client
Project Name:	Commercial Contained Burn Facility
Project Location:	United States
Project Dates:	2013
Client Contact:	Confidential

Project Summary

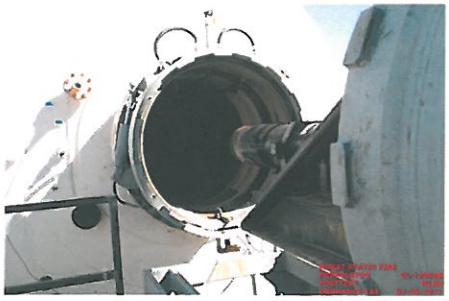
El Dorado Engineering, Inc. (EDE) was contracted by a confidential client to provide a turnkey Contained Burn Facility to process off-spec energetic materials and explosive contaminated waste products. This facility included the feed system, thermal treatment containment vessel, pollution control system, and controls.

EDE assisted the client in obtaining all environmental permits and approvals required for the construction of the facility. The facility was tested and demonstrated to comply with air emissions restrictions, and feed rate of materials. The facility included a feed system for incremental feeding of energetic items and a separate feed system for explosive contaminated wastes. The pollution abatement system included controlled cooling, a bag house, and HEPA filter that provided absolute complete control of particulate emissions.

El Dorado Engineering, Inc.

DOD Customers:	Huntsville Army corps of Engineers
Project Name:	Contained Burn for RM Propellant
Project Location:	Letterkenny Army Depot, PA
Project Dates:	2015
Client Contact:	Michael Davis, 907-354-2435

Project Summary

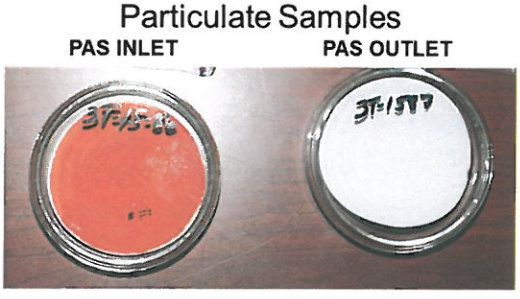


El Dorado Engineering, Inc. (EDE) proposed that contained burning would be an effective and efficient way to demilitarize tactical rocket motors. It was calculated that although it is known that incomplete products of combustion exist at the rocket motor nozzle exit that the combustion could go to completion with entrained air. Firing the rocket motor in a containment vessel allows for capture of all motor exhausts capable of being scrubbed relatively small, highly efficient pollution control system. EDE previously had demonstrated this concept by firing an MLRS rocket motor at Arnold Engineering Development Center in a contained burn rocket test chamber, which handles up to 50,000 pounds per firing cycle. Data was collected for designing a smaller scale containment chamber specific for the MLRS rocket motor.

Based upon this successful testing, EDE was tasked to design and build a first-of-a-kind closed thermal treatment facility for the disposal of a wide variety of tactical rocket motors. This facility is being designed and constructed specifically as a clean alternative to open burning via static firing. The first project task was to perform an evaluation of viable thermal treatment methods. The results of this study selected contained burning as the superior technology. Smaller rockets such as the MLRS are to be fired directly into a firing chamber that will contain the heat and exhausts. After cooling, the exhausts are passed through a pollution control system. Very large rocket motors are segmented, the segments ignited, and the exhausts similarly contained.

The turnkey project consists of all facilities and equipment necessary to process the rocket motors. This includes the loading system, the confined burn thermal treatment chamber, and pollution abatement system (PAS) equipment. Successful full scale demonstration testing was performed at China Lake, CA, as part of this project.

EDE obtained the required environmental permits on behalf of Letterkenny Army Depot. The facility has also received the required DDESB approval. The system is designed for up to 805 lbs. of propellant per batch cycle, with up to three batches per hour. The production facility is under construction with systemization scheduled for Fall of 2015.



El Dorado Engineering, Inc.

DOD Customers:	MARID
Project Name:	Transportable Flashing Furnace and PAS
Project Location:	Mcalester, OK
Project Dates:	2010
Client Contact:	Denis Ridpath, 918-420-6099

Project Summary

MARID planned to continue to use the Transportable Flashing Furnace (TFF) manufactured by El Dorado Engineering, Inc. (EDE) for onsite cleanup of explosive wastes on an emergency response basis. Because of concern that the equipment may be required to process materials next to neighborhoods and people, EDE was tasked to design and provide a mobile, trailer mounted air pollution control system so that where required, the transportable furnace could be operated without emitting harmful materials from to the environment.

El Dorado Engineering, Inc.

DOD Customers:	Crane Naval Weapons Center
Project Name:	Magnesium Recovery Pilot Plant (MRPP)
Project Location:	Crane, IN
Project Dates:	2012
Client Contact:	Sara Poehlein, 812-854-3190

Project Summary

El Dorado Engineering, Inc. (EDE) was awarded a series of contracts to provide all necessary services to design, procure and fabricate, and install a pilot plant to recover magnesium from obsolete flares. The recovered magnesium was required to meet the specifications of new material so that it could be used in the Navy's current production. This pilot plant included a waterjet system to washout materials from obsolete flares. The byproducts were then separated from the magnesium by a series of equipment processes and the magnesium was cleaned, classified, dried, and packaged for reuse.

The plant had a state-of-the-art controls system and included all equipment for preparing and manipulating the flares for washout through all downstream processes to high-grade magnesium recovery. This included a material handling system to safely transport and feed flammable flare composition through the process, while mitigating significant flammability hazards associated with these materials. Installation and checkout at Crane Naval Weapons Center was completed in 2012. Demonstration testing was performed on 60 mm, 81 mm, 4.2, and LU-2 flares. The polishing columns were able to achieve 96% magnesium purity for recovery on items that have spherical magnesium and laminate binder. The benefits of this project include a safe and environmentally clean process to dispose of obsolete flares and at the same time recover a highly valuable magnesium material for recycle and reuse.

El Dorado Engineering, Inc.

DOD Customers:	NATO (NAMSA/NSPA)
Project Name:	NATO EWIs
Project Location:	Albania/Ukraine
Project Dates:	2007/ 2011
Client Contact:	Fred Peugeot, 352-3063-5994

Project Summary

El Dorado Engineering, Inc. (EDE) was selected by NATO (NSPA formerly NAMSA) in a worldwide competitive procurements to provide an Explosive Waste Incinerator (EWI) for both Albania (2007) and Ukraine (2011) as part of the Partnership for Peace Program to rid the world of dangerous stockpiles of ammunition.

The project in Elbasan, Albania, included total responsibility to prepare the design, procure and fabricate all equipment, ship the equipment, install the equipment, and train the operators. The EWI is used to dispose of munitions at a very high feed rate with complete pollution control and absolute safety. EDE was awarded this contract based on a competitive bid of international companies to NAMSA. EDE had the most experience of any company bidding in providing ammunition demilitarization equipment of this nature. EDE was able to exceed NAMSA's requirements and still provide the lowest overall bid for the project. EDE effectively used in-country personnel to assist with the program. This was regarded by NAMSA as the "Showcase Humanitarian Project" as the plant completed the ammunition disposal contract ahead of schedule, with more than 23 million pounds processed.

The EWI project in Donetsk, Ukraine, included total responsibility to prepare the design, procure and fabricate all equipment, ship the equipment, install the equipment, and train the operators. The EWI is used to dispose of munitions at a very high feed rate with complete pollution control and absolute safety. EDE was awarded this contract based on a competitive bid of international companies to NAMSA. This facility utilized more advance pollution abatement equipment than required for the prior Albanian project to meet local requirements and handle Eastern Bloc ammunition, which contained Mercury Fulminate primers. Bulk explosives and propellants were successfully processed as part of acceptance testing.

Appendix D: Explosive Service International, Inc. Relevant Projects

Customers:	**Explo Systems Inc.**
Project Name:	**Camp Minden Magazine Explosion**
Project Location:	**Camp Minden, Louisiana**
Project Dates:	**October 2012**
Client Contact:	**Col. Ronnie Stuckey Louisiana Military Department**

Project Summary:

In October of 2012, ESI was contacted by Explo Systems Inc. and requested to respond to Camp Minden after a bunker containing propellant powder exploded. ESI responded with and under the supervision of the Louisiana State Police, LDEQ and LMD safely handled and disposed of approximately 15,000 lbs. of M-6 and other propellant that remained after the explosive magazine and tractor trailer containing approx. 160,000 lbs. of explosives, detonated. ESI managed other contracted personnel while they retrieved the material which was spread over a 5 acre area around the bunker. ESI was the sole contractor that conducted all open burning operations of the material on site. We coordinated our operations through several state regulatory agencies who were heavily involved in the remediation effort. During this incident, we safely disposed of M-6 and other propellant powders recovered from the explosion without incident. The environmental working conditions were less than ideal. Our Louisiana based explosive company and experienced personnel provided a safe resolution to a catastrophic event for the State of Louisiana, Louisiana Military Department at Camp Minden.

Customers:	**Railroad Emergency Response**
Project Name:	**Vent and Burn of Hazardous Materials**
Project Location:	**United States and Canada**
Project Dates:	**1989-Present**
Client Contact:	**Pat Brady-BNSF Railroad (817) 740-7358** **Danny Simpson-CN Railroad (708) 476-5967** **Tim Obrien-UP Railroad (281) 350-7490**

Project Summary:

ESI's innovative technology lead to the development of a state of the art procedure to vent high pressure rail car tanks carrying vast amounts of dangerous high pressure gases. This concept commonly referred to as "Vent and Burn", uses an ESI designed explosive charge to cut a precision hole in a steel tank car and vent the vapors while simultaneously burning them. This process is conducted on an emergency response basis and as a last resort to prevent the rail car from exploding under intense pressure. The unique explosive charges utilized during this procedure were engineered by ESI and have led to the safe resolution to over (95) operations in both the United States and Canada. This ESI technique has been responsible for saving countless emergency response personnel lives, as well as, saving our customers millions of dollars in property damage from the devastating effects of an uncontrolled explosion. ESI is the only company in the world that has successfully conducted this emergency response explosive mitigation technique. We currently hold service agreements with all the major US and Canadian Rail Road companies. We have routinely worked with numerous regional offices of the United States Environmental Protection Agency, countless state environmental agencies around the United States, as well as, Canadian transportation and environmental officials.

Customers:	**US Army Corps of Engineers**
Project Name:	**Fork Polk UXO/UXB**
Project Location:	**Fork Polk US Army-Ordnance Range**
Project Dates:	**Reoccurring**
Client Contact:	**USA Environmental**

Project Summary:

Because explosive contractors must be licensed to conduct explosive work in the State of Louisiana; ESI is routinely hired by range clearance contractors who are not licensed to conduct these disposal operations at military installations around the state. Some of ESI's customers include USA Environmental and PIKA International. These explosive projects are in support of military range clearance operations. These photographs illustrate ESI's explosive capabilities in support of contracted range disposal operations.

Customers: **US EPA Region VI & Environmental Quality Mgt. Region VI, ERRS Contractor**

Project Name: **Hurricane Katrina Ordinance/Explosive Recovery**

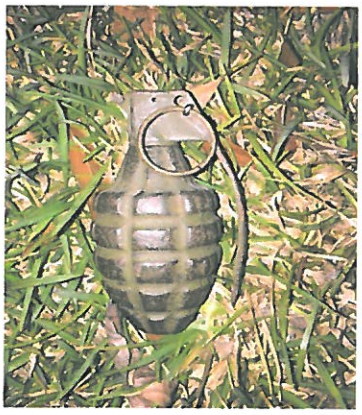
Project Location: **Louisiana & Mississippi**

Project Dates: **2005 - 2007**

Client Contact: **Jack Greber, EQM, JGreber@EQM.com**

Project Summary:

During the aftermaths of Hurricanes Katrina and Rita from 2005-2007, Explosive Service International (ESI) managed a multi-million dollar long term EPA contract which safely recovered and transported over 400,000 pounds of hazard class 1.1, 1.3 and 1.4 materials from the Louisiana, Mississippi and Texas coastal areas. During this two year project, ESI without incident, responded and remediated explosives, fireworks, smokeless and black propellant powder and firearms related recovers in less than ideal operating conditions. ESI worked directly with Environmental Quality Management (EQM), EPA Region VI ERRS contractor, as well as, for numerous US EPA Region VI on scene coordinators.



During the contract, ESI conducted numerous on-site explosive and hazard material disposals by "Open Burn" on various types of 1.1, 1.3 & 1.4 materials in the field under the supervision of The Louisiana Department of Environmental Quality (LDEQ) and EPA. ESI's management successfully coordinated all of these recovery/disposal efforts to a safe resolution. As a Louisiana owned and operated company, ESI used its Louisiana employees to successfully resolve a complex Louisiana problem that posed an eminent threat to the citizens of our state. The relationship formed with EQM during this prolonged emergency response operation will prove to be vital to the success of the Camp Minden M6 disposal operation.

Customers:	**US Environmental Protection Agency**
Project Name:	**Iso-Butane Vent and Burn**
Project Location:	**Baton Rouge, Louisiana**
Project Dates:	**August 2012**
Client Contact:	**Greg Fife, OSC EPA Region VI**

Project Summary:

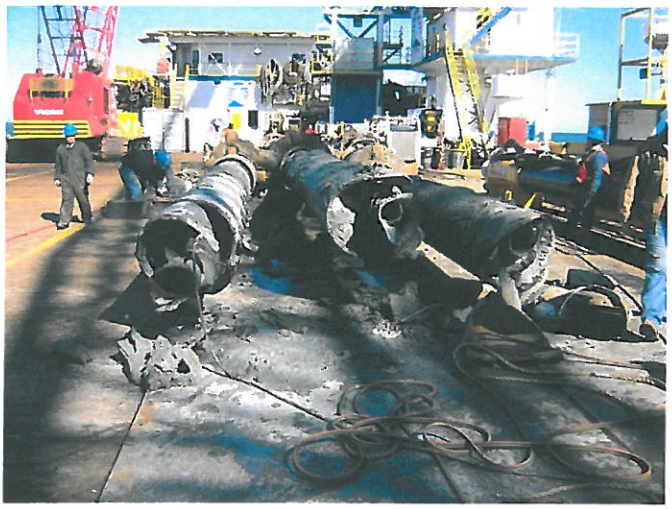
In August of 2012, ESI responded to a complex hazardous materials incident on Interstate 10 at Essen Lane in Baton Rouge. A cargo tanker carrying 15,000 gallons of hazardous Isobutane material was involved in accident near Our Lady of The Lake Regional Hospital. ESI was contacted by The Louisiana State Police (LSP) and requested to respond to the scene for remediation through ESI's "Vent and Burn" procedure. ESI's Vent and Burn technique was developed solely by ESI to remotely cut precision holes in steel tanks utilizing explosives before they catastrophically fail due to extreme pressure. Once the cargo tank is vented, the dangerous vapors are consumed by fire, preventing first responders from attempting to transfer the otherwise unstable material with potentially deadly results. The assessment of the incident resulted in a decision by the incident command structure to request ESI to Vent and Burn the damaged cargo tanker which was leaking hazardous materials into the surrounding community. ESI was included in the incident command structure and coordinated its explosive remediation efforts through the LSP, Louisiana Department of Environmental Quality and Environmental Protection Agency Region VI. The circumstances surrounding the incident called for the evacuation of a nursing home, residential homes and businesses surrounding the Essen Lane/Interstate 10 area of Baton Rouge, a major artery for East/West bound traffic through the US. EPA assumed a leadership role and contracted directly with ESI to safely mitigate the incident. ESI's engineered explosive charges were successfully utilized to resolve a complex incident for both the citizens of Louisiana as well as numerous regulatory agencies. This was ESI's ninety-second (92) successful vent and burn operation and confirmed that our specialized explosive skills mitigated an otherwise catastrophic event in our states capitol.

Customers:	**Explosive Demolition/Explosive Marine Salvage**
Project Name:	**Explosive Projects**
Project Location:	**Gulf of Mexico/Internationally**
Project Dates:	**1987-ongoing**
Client Contact:	**Oil and Gas Industry-Demolition and Salvage Contractors;** **Bisso Marine LLC-Cody Sims (281)897-1500** **Fieldwood Energy LLC-Brandon DeWolfe (281)784-4700** **Manson Gulf Inc.-Brandt Stagni (985)580-1900** **Tetra Technologies-Troy Bernardo (281)364-5032**

Project Summary:

As both a Federally and State of Louisiana licensed explosive contractor, ESI manufactures and deploys over 200,000 lbs. of explosives annually from our Louisiana based explosive facility in support of our explosive demolition and marine salvage operations. ESI holds two (2) separate US patents on explosive cutting tools we developed and utilize in the explosive demolition industry. Since our inception in 1987, ESI has successfully and safely conducted thousands of explosive demolition operations both domestically and internationally. We have created new state of the art explosive technology which was developed to use 75% less explosives than routine blasting operations. This new technology was developed to provide reduced environmental impact during explosive operations. Our unique patents focus on safer more efficient explosive technology for our industry.

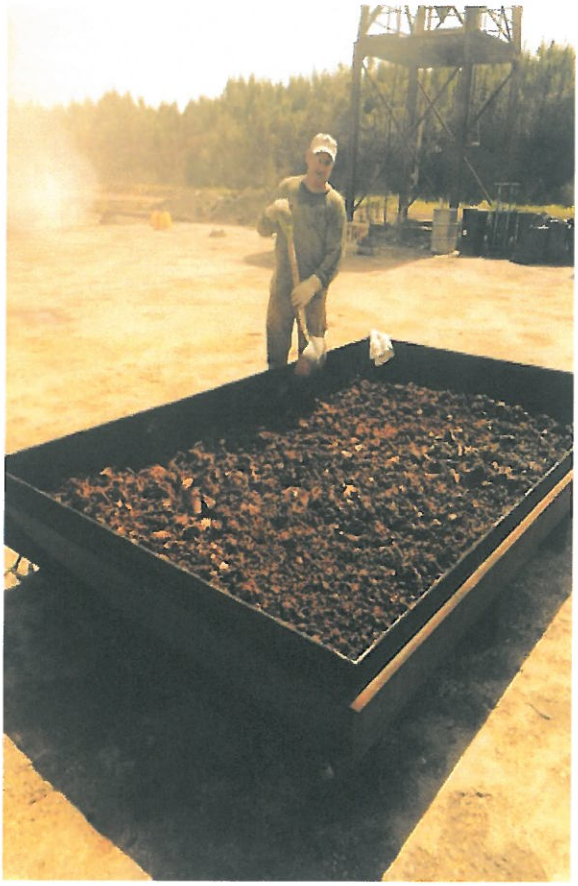
As the leading explosive demolition and marine salvage contractor in the Gulf of Mexico, we routinely work in less and ideal conditions achieving job success for our customers. Our team of experienced Explosive Technicians is some of the most knowledgeable in the industry. Although we are a small veteran owned Louisiana company, we are highly specialized and capable of conducting large scale demolition and disposal projects. Our resources range from experienced explosive handling personnel to the successful completion of unique explosive projects which we feel have attributed to our well known success in our industry. Safety is our mission and our impeccable safety record with "zero" explosive accidents with over twenty-eight (28) years of experience in the explosive industry speaks for itself. We are recognized as "certified" explosive safety trainers by the Louisiana State Police and teach (32) hour, (16) hour and (8) hour refresher explosive courses from our Louisiana based explosive range facility.



Customers:	**State of Louisiana, Louisiana Military Department**
Project Name:	**TNT Sludge, Ammonium Picrate, Pink H_2O Disposal**
Project Location:	**Camp Minden, Louisiana**
Project Dates:	**August 2014**
Client Contact:	**Col. Ronnie Stuckey, Louisiana Military Department**

Project Summary:

In August of 2014, ESI was awarded a contract to dispose of 2,800 lbs of TNT, 150 lbs of Ammonium Picrate and 1,100 gallons of contaminated TNT Water for the Louisiana Military Department. ESI responded to Camp with (2) of their burn trays and supporting equipment necessary to complete this "Open Burn" project. ESI prepared and obtained all necessary LDEQ permitting required to conduct the "Open Burn" on Camp Minden. After establishing a temporary burn site at E-line, ESI personnel safely conducted all tasks associated with the disposal under the supervision of the LMD, Louisiana Department of Environmental Quality (LDEQ) and EPA. ESI used one of our large portable explosive magazines to safely transport the hazard class 1.1 explosives from the magazines to the disposal site. The project resulted in the safe disposal of approximately 2,950 lbs of hazardous explosives and approximately 1100 gallons of contaminated TNT water profiled, manifested and transported offsite for disposal. ESI's Louisiana based business and current licensed explosive technicians provided the State of Louisiana-LMD a viable means to safely remove explosive material from the magazines and dispose of it on-site at Camp Minden. ESI's procedures, techniques and equipment used to conduct this disposal will be similar in concept to the pending M-6 disposal. Again, ESI demonstrated our ability to conduct on-site disposal operations in less than ideal circumstances at Camp Minden without incident.



Appendix E: Environmental Quality Management Relevant Projects

Customer:	U.S. Environmental Protection Agency
Project Name:	Conroe Creosoting Site
Project Location:	Conroe, Texas
Completion Date:	2003

Environmental Quality Management, Inc.

Environmental Quality Management, Inc. (EQ) was tasked to demolish site structures, clean and demolish process tanks and vessels, prepare and construct a RCRA-compliant waste storage cell, and excavate and stage contaminated soils into the prepared cell outside of Conroe, Texas. This removal action included the excavation and removal of 262,000 cubic yards of soil and material contaminated with creosote, arsenic, pentachlorophenol and dioxin. Under EQ's direction a RCRA vault was constructed measuring 600' x 600' x 20'. The vault was designed using guidelines set forth by the U.S. EPA under the Resource Conservation and Recovery Act including artificial liners and a leachate collection system.

This vault was designed to hold over 250,000 cubic yards of material, including stockpiled contaminated soil, building and tank demolition material resulting from the dismantling of two facilities and over 38 tanks. Approximately 2,500 linear feet of an active stream bed was remediated of runoff waste from the abandoned facility requiring the stream to be dammed and diverted during this process. Once the waste repository was constructed, impacted soils were excavated and loaded into the waste storage cell. Excavated spoil was placed into the cell in 6" to 9" lifts and carefully compacted with rubber-tire compactors to avoid damage to the HDPE liner. This was the first site that was listed on the NPL during the removal and de-listed upon completion.

All work was completed after thirteen months and a "construction complete" designation was given to this NPL site by the U.S. EPA.

Customer:	U.S. Environmental Protection Agency
Project Name:	Hurricane Katrina HHW Removal
Project Location:	New Orleans, Louisiana Area
Completion Date:	2006

Environmental Quality Management, Inc.

Environmental Quality Management, Inc. (EQ) was tasked to assist in management in the aftermath of Hurricane Katrina in September of 2005. Responsibilities included the overall management of response and collection efforts for the U.S. Government in multiple parishes of Louisiana in the aftermath of Hurricane Katrina. The scope of work (SOW) included the collection, consolidation and recycling/ disposal of storm-related hazardous and non-hazardous wastes from land and marine areas.

Additional responsibilities included the active supervision of over 1,000 personnel during this response action, utilizing the Incident Command System (ICS) to assist in planning, execution and overall management of the response action. Additional responsibilities included working in an advisory capacity with various local, state and federal responders.

Customer:	U.S. Environmental Protection Agency
Project Name:	Lake Charles NRG Site
Project Location:	Lake Charles, Louisiana
Completion Date:	2012

Environmental Quality Management, Inc.

Environmental Quality Management, Inc. (EQ) was tasked on this remedial action involving the removal of 300,000 gallons of hazardous waste oil, water & tanks bottoms from 26 tanks located in an abandoned refinery in Lake Charles, LA. The Lake Charles NRG site was a 4.4 acre site located in a light-industrial area on the eastern side of Lake Charles, LA. Refinery operations at Lake Charles NRG consisted of salvaging petroleum feed stocks by heating and fractionating into naptha, number 2 fuel oil, and residual fuel oil. Operations at the site ceased in 1999.

The site contained the refinery plant, twenty-four (24) above ground cylindrical steel tanks, two FRAC tanks, two sludge boxes, a tractor trailer truck with an attached tank trailer, nine poly tote tanks, one rectangular steel tank used for wastewater treatment, twenty-five (25) steel and poly drums and a roll-off box. There was approximately 200,000 gallons of oil/water/waste mixture within the tanks. Secondary containment existed around the tanks; however, rainwater and some waste liquid from leaking tanks have collected inside the containment structures and several of the containments are leaking liquids.

An NPL site assessment was conducted at the site that determined the site was not eligible for NPL ranking. The assessment did, however, determine that the tanks and drums contained approximately 200,000 gallons of hazardous substances (not including the liquids in the secondary containments).

Project tasks included: the removal and disposal of the waste; demolition of the 26 tanks and the refinery; excavation and disposal of 1,000 tons of contaminated soil; and the restoration of the land for reuse by the Parish. Disposal for waste from this facility included incineration of F-listed tank bottoms, fuel blending of D-listed oil, treatment of D-listed liquids, direct landfill of impacted soils, and recycling of 400 tons of tank and refinery steel.

Customer:	U.S. Environmental Protection Agency
Project Name:	Pointe Coupee Site
Project Location:	New Roads, Louisiana
Completion Date:	2009

Environmental Quality Management, Inc.

Environmental Quality Management, Inc. (EQ) was tasked on this remedial action involving the demolition and removal of the former facility structures, as well as removal of contaminated soil within the boundary of the site. The Pointe Coupee site was an inactive wood preserving facility situated on approximately 0.7 acre of land located in the town of New Roads, Pointe Coupee Parish, Louisiana. The facility was located in a primarily residential neighborhood and incorporated several structures within the property boundary. The removal action involved the demolition and removal of the former facility structures, as well as removal of contaminated soil within the boundary of the site.

This site included one office building, two lumber sheds with an associated office, two above ground storage tanks, several concrete pads, a house on blocks, and a retort vessel building, with an attached open-walled track shed.

The general scope of work included:

- Removal of tank and vessel waste;
- Decontamination of vessels and tanks;
- Demolition of the facility structures and vessels;
- Excavation of contaminated soil;
- Characterization, transportation and disposal of debris and waste; and,
- Site restoration.

The physical location of the site, and its' location near commercial businesses and residential neighborhoods, required maintaining continuous air monitoring during site activities and the application of appropriate engineering controls during all times. The action level for airborne particulates was set at a level to accommodate local concerns and required constant monitoring and adjustments to work activities on site to successfully meet this objective.

The project resulted in the removal of in excess of 2,600 yd^3 of dioxin and PCP-contaminated soils and demolition debris. During the excavation phase, targeted grids and depths were successfully met for both state and federal authorities. Excavation activities were complicated by the varying cleanup levels required in each agency's designated areas.

Customer:	U.S. Environmental Protection Agency
Project Name:	Van der Horst USA Corp Site
Project Location:	Terrell, Texas
Completion Date:	2009

Environmental Quality Management, Inc.

Environmental Quality Management, Inc. (EQ) was tasked with this remedial action involving the decontamination, demolition and excavation of this impacted, abandoned chrome and iron plating facility near downtown Terrell, Texas. The project site occupied an entire city block and the condition of the site and general access to the site's buildings was complicated by the effects of several fires and occasional vandalism during the time the facility was vacant.

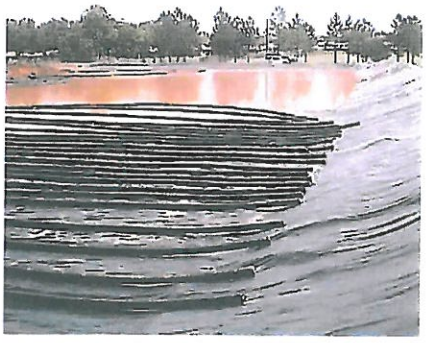
In excess of 475 drums of various acidic and basic solids and liquids were located inside the building in various stages of disrepair, 28 treatment vats containing chromic acid liquids and solids, hydrochloric acid liquids and solids and alkaline liquids and solids were recovered, bulked and shipped off-site.

The contents of the site's basement held in excess of 200,000 gallons of acidic liquids and sludge requiring stabilization and removal prior to demolition. Numerous areas on site were contaminated with chromic acid spills over the years requiring characterization and excavations once the site's structures were decontaminated and demolished.

Appendix F: Southern Environmental Management Services Relevant Projects

SEMS Inc.
Southern Environmental Management & Specialties

Customer: Geo-Marine, Inc.
Project Name: England Air Force Base-
Project Location: Alexandria, Louisiana
Project Dates: 2000
Client Contact: Mr. Greg Dennis
(210) 930-3007



Project Description

SEMS was contracted by Geo-Marine, Inc. to excavate and treat an estimated volume of 12,500 in place cubic yards of soil contaminated by jet fuel from a leaking underground pipeline at a former Air Force Base. Concentrations for contamination ranged between 500 and 3,000 ppm.

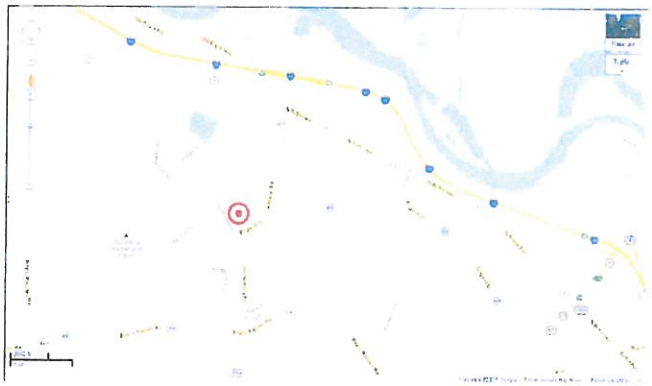
A Land Treatment Area (LTA) was constructed on the property to accept the excavated, contaminated soil. This LTA measured approximately 300 feet by 300 feet, bordered by a five foot berm. The entire floor and berm surfaces were covered with 30mil PVC liner. The edges were anchored and seams were welded. Approximately 8,000 linear feet of 4 inch perforated plastic pipe was installed on the floor of the LTA, and connected to a header system. This header pipe was connected to a 1,500 cfm blower unit.

Excavated, contaminated soil from between 4 and 12 feet below existing grade were delivered to the LTA in all terrain dump trucks and placed over the piping system. Approximately 15,000 cubic yards (pre-excavation volume) were excavated, transported and placed in the LTA.

The blower unit was started when the majority of the soil had been placed. The blower provided positive, warmed airflow to the bottom surface of the staged soil. This airflow increased the effectiveness of the naturally occurring microbial activity within the soil. Storm water generated during the project landing in the LTA was collected in a sump for storage and was applied to the upper surface area to maintain optimal moisture content during treatment.

Soil treatment was completed within one month. Verification sampling within the LTA at all depths demonstrated that the contamination levels had been reduced to below the action level.

Upon completion of the project, the property was turned over to new owners and the excavation became a portion of a new golf course's lake. The treated soils staged in the LTA was used on the new golf course in the development of contours for tee boxes, fairways and greens.



Site Location

SEMS Inc.
Southern Environmental Management & Specialties

Customer: Lockheed Martin
Project Name: Rinse Water Impoundment
Project Location: New Orleans, LA
Project Dates: 1997
Client Contact: Mr. Marty Rowland
(504) 257-3435

Project Description

SEMS was contracted by Lockheed Martin to perform remediation and closure of the Rinse Water Impoundment. Remedial activities included removal and decontamination of concrete, soil excavation and treatment with calcium oxide, vapor collection using a subsurface piping system and a 25 horsepower Cincinnati blower, treatment of collected vapors and water using activated carbon.

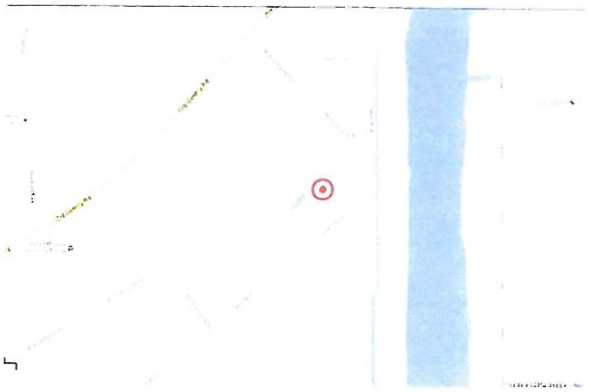
The Rinse Water Impoundment was considered a RCRA hazardous waste unit. The area to be remediated was irregularly shaped and measured approximately 170' by100'. The contamination consisted of approximately 4,000 pounds of Volatile Organic Compounds (TCE, DCE, VC, and PCE). The area consisted of clay, peat, and cypress wood debris.

The scope of work as defined by Lockheed Martin, was to reduce the concentration of VOCs in soils beneath the Impoundment by 90 percent. Lockheed's preferred remedial technology was chemically enhanced mixed region vapor stripping (MRVS). The applicability of the technology was evaluated by a national laboratory to be feasible. SEMS estimated cost was approximately $2,000,000.00.

During mixing operations SEMS personnel were in level B PPE and Lockheed monitored continuously. During the height of mixing only a couple of excursions at the fence line were noted, but never reached the edge of the plant site.

SEMS completed the remediation by using conventional equipment to remove soil and mix with calcium oxide. Vapor collection was accomplished using a piping system and large blower. SEMS and Lockheed measured vapor concentrations entering the carbon vessels and reported to the LDEQ and EPA that over 70,000 lbs (17.5 times the mass defined in the RFP) were collected.

SEMS completed the project with a 99.65 percent of the containments removed and a project cost of 1.3 million dollars, much less than the MRVS even with the large increase in mass removed.



⊙ Site Location

SEMS Inc.
Southern Environmental Management & Specialties

Customer:	Ethyl Corporation	
Project Name:	Groundwater Monitoring Program, Groundwater Recovery Program, and RFI	
Project Location:	Baton Rouge, Louisiana and Pasadena, Texas	
Project Dates:	Ongoing, 10 years	
Client Contact:	Mr. Gene Ponti (LA)	Mr. Steve Livesay (TX)
	(225) 359-2856	(713) 740-8317

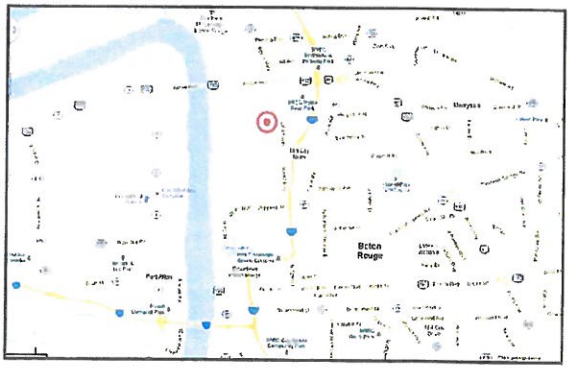
Project Description

SEMS provides a wide range of environmental, remediation, engineering, and management services for the Ethyl Corporation. A majority of the fieldwork has been performed at the Baton Rouge, Louisiana and Houston, Texas facilities. Both of these sites have groundwater and soil impacted from chlorinated organics, including DNAPL 1,2-Dichlorethane (DCA) and Perchloroethylene, (PCE).

Ethyl Corporation, Baton Rouge, Louisiana facility is currently under RCRA Facility Investigation (RFI), which includes 80 solid waste management units (SWMUs), and 7 areas of concerns (AOCs). SEMS has written all of the work plans for the RFI and investigated each of the SWMUs and AOCs. This has included the installation of 20 groundwater monitor wells ranging from a total depth of 25 feet bgs to 110 feet bgs. SEMS provided professional oversight of the well installation and development, managed the professional land surveying of the wells, and prepared the LDOTD registration forms. In addition over 100 soil borings have been advanced utilizing direct push technology (GeoprobeJ) or by hand augering. As a portion of the RFI, SEMS has performed groundwater monitoring and sampling activities as well as sludge, rainfall runoff, and storm-water sampling.

SEMS also performs Ethyl=s Groundwater Monitoring, Sampling, and Reporting Program for the Baton Rouge facility. This program includes the monitoring and sampling of 130 groundwater monitor wells on a semi-annual basis. Semi-annual and annual reports are also prepared and submitted to the LDEQ. This also includes well inspection and routine maintenance. SEMS also performs semi-annual landfill inspections and quarterly recovery system inspections.

At the Ethyl Corporation - Houston Plant, located in Pasadena, Texas, SEMS performs the Groundwater Monitoring, Sampling, and Reporting Program. This program includes the monitoring and sampling of 55 groundwater monitoring wells. SEMS prepares quarterly, semi-annual, and annual reports for the Houston Plant, which are submitted, to the TNRCC.



⊙ Site Location

Appendix G: Insurance

BancorpSouth
Insurance Services, Inc.

January 20, 2015

Office of State Procurement
P.O. Box 94095
Baton Rouge, LA 70804-9095

RE: Insurance Requirements

To whom it may concern:

Workers Compensation – The Minimum Scope and Limit (Attachment F) for this line of insurance is a policy that is in compliance with the Workers Compensation law of the State of Louisiana and an Employers Liability Limit of $1,000,000. Explosive Service International, Poe Enterprises, LLC and William T. Poe and Associates, Inc has a policy of Workers Compensation insurance through the Louisiana Workers Compensation Corporation with policy dates of December 31, 2014 to December 31, 2015. The Employers Liability limits meet the requirements of $1,000,000.

The requirement that the policy insurer agrees to waive all right of subrogation against the State of Louisiana etal., as spelled out in Attachment F is met through endorsement WC 00 03 13, "Waiver of Our Right to Recover from Others." This is a "blanket" waiver of subrogation.

Commercial General Liability – Attachment F requires limits of $10,000,000 for this line of insurance, including coverage for explosion risk. The General Liability insurer, First Specialty Insurance Corporation (AM Best rating – A+ 15) provides limits of $1,000,000 per occurrence and $2,000,000 general aggregate. The policy provides coverage for the explosion risk.

AXIS Surplus Insurance Company (AM Best rating – A+ 15) provides $5,000,000 excess liability coverage over the general liability policy.

We will place coverage for the remaining limits to bring the total limits to $10,000,000 with another excess liability policy that meets the Financial Strength rating of the State of Louisiana.

The additional insured endorsement on the General Liability policy names as additional insured anyone whom the insured has agreed to name as additional insured in writing in an agreement or contract.

Automobile Liability – Attachment F requires a minimum limit of insurance of $1,000,000 per occurrence limit with a $3,000,000 combined single limit. The Automobile Insurer, State Farm, (AM Best Rating – A+ 15) provides $1,000,000 combined single limit per accident. AXI Surplus Insurance Company (see above) provides $5,000,000 excess liability coverage over the Automobile Liability policy.

Project Specific Pollution Liability Policy – Attachment F requires a minimum limit per occurrence of $10,000,000 for this coverage. We have procured an underwriters agreement with a company that meets the Financial Strength rating of the State of Louisiana to provide this coverage at these limits. Additionally, this policy will provide a en (10) year Extended Reporting Endorsement for this coverage. The policy period will meet the requirements of Attachment F: the inception date no later than the first day of anticipated work; the expiration date no earlier than 30 days after anticipated completion of the work.

There will be an additional insured endorsement as part of the policy naming the State of Louisiana etal., as required by Attachment F.

Deductibles – the following are the deductibles by each line of coverage:
Workers Compensation/Employers Liability – no deductible.
General Liability Policy - $10,000 deductible, including defense and loss.
Excess Liability Policy – no retention.
Automobile Liability – no liability deductible.
Project Specific Pollution Liability Policy - $50,000 per occurrence deductible.

Other Coverage Provisions

1. We will request 30 Day Notice of Cancellation when required by written Contract to the State of Louisiana at the following address Office of State Procurement, Attention: Hilary Stephenson, P.O. Box 94095, Baton Rouge, LA 70804-9095.
2. All policies provide coverage for the period of time the work is in progress under this contract.
3. There is no provision in any of these policies that allow for recourse against the State of Louisiana, etal., for payment of premiums or assessments.
4. None of these policies has reporting provisions.

Acceptability of Insurers – all insurers that will provide coverage will have an AM Best rating higher than A-:VI.

Verification of Coverage – Certificates of Insurance reflecting proof of required coverage will be provided per the requirements of Attachment F. They will be signed by a person authorized by the insurer to bind coverage on its behalf.

Subcontractors – Explosive Service International will endeavor to maintain that all subcontractor have certificates on file as outlined in section F of the RFP.

BancorpSouth
Insurance Services, Inc.

Indemnification/Hold Harmless Agreement – all third party liability policies will have a clause which will provide defense and hold harmless for the State of Louisiana, etal., according to the requirements of Attachment F.

If you have any questions or concerns, please do not hesitate to contact me at the numbers listed below.

Sincerely,

Michael P. Grace, CPIA
Account Executive
(225) 336-3272 Phone
(800) 486-8283 Toll Free
(225) 490-9272 Fax
mike.grace@bxsi.com

Appendix H: Hudson Initiative

LOUISIANA ECONOMIC DEVELOPMENT

DIVISION OF SMALL BUSINESS SERVICES

This certification acknowledges that

William T. Poe and Associates Inc.

is Certified-Active as a Small Entrepreneurship with
Louisiana Economic Development's Hudson Initiative.

This certification is valid from 9/2/2014 to 9/2/2015 .

Certification No. 11271

John W. Matthews, Jr.,
Executive Director, Entrepreneurial Services

Small Entrepreneurship Certification - Hudson Initiative

Date: 9/2/2014
Certification ID: 11271

William T. Poe and Associates Inc.
9985 Baringer Foreman Road
Baton Rouge , LA , 70809

Congratulations! Your business has been certified by the Louisiana Department of Economic Development in the Hudson Initiative.

The purposes and intent of this program are to provide the maximum opportunity for Louisiana-based small businesses to become certified under the Hudson Initiative in order to facilitate access to state procurement and public contracts; and to encourage business opportunities for Louisiana small businesses and entrepreneurs.

Annual online re-certification is a requirement to remain certified in this program. As a reminder, the LEDSmallBiz website will automatically send a notification, via email, one month prior to your business's annual re-certification date. Failure to report or failure to report on a timely basis will result in termination for non-compliance of your business's Small Entrepreneurship (Hudson) certification and loss of the benefits of the program.

Now that your business is certified in the Hudson Initiative, your business should register with state purchasing through the LaGov Supplier Portal (LaGov) in order to utilize this program to its fullest potential.

Thank you for participating in the Hudson Initiative. Together we will build a better economy for our state and a stronger business climate for your own success and future.

John W. Matthews, Jr.
Director, Small Business Services

Appendix I: ESI Explosive Licenses (Company and Personnel)

Explosive Service International

Current Louisiana and Federal (ATFE) Explosive Licenses

Licensing

State License Requirements-Louisiana State Police, Title 55, Chapter15.

All personnel involved in this project shall possess at a minimum, a "Handler" class explosive license issued by the Louisiana State Police, LSP. Personnel involved in handling regulated materials in the Magazine Area and Material Staging Area located at Camp Minden at a minimum must be licensed as a "Handler".

By regulatory definition: *"Handler"*—a person who touches, moves, or otherwise handles explosives but does not detonate or otherwise effect the explosion of explosives by loading, arming, or firing the explosive. The license issued to a handler shall not be used by a blaster or user who uses explosives as an ultimate consumer. However, an individual with a blaster's license may engage in the activities of a handler without a handler's license.

All ESI personnel involved in the handling, moving, temporary storage, use, and/or disposal of regulated product will possess, at a minimum, a LSP issued "Blaster" explosive license. For this project, "blaster" shall refer to Explosive Technicians conducting daily explosive disposal operations at the disposal site. All ESI technicians are currently licensed "blasters" having successfully completed, at a minimum, 32 hours of initial explosive training. Additionally, they all operate in a field environment storing, using and disposing of explosives.

By regulatory definition: *"Blaster"*—any person employed by a primary licensee who detonates or otherwise effects the explosion of an explosive by loading, arming or firing an explosive or who is in immediate personal charge and supervision of one or more other persons engaged in such activity.

Louisiana explosive regulations require that all "blasters" and "handlers" fall under the direct supervision of a licensed "User" class licensee. ESI shall provide, at a minimum, three (3) "User" licensees for the duration of this project. These "Users" shall be the ESI Explosive Project Manager, Material Removal and Transportation Supervisor and Material Disposal Supervisor. All licensed ESI personnel working on site shall fall under the direct control and authority of the ESI Users license. The Users shall have the knowledge and experience necessary to set all safety procedures and disposal techniques, as well as, provide the licensed blasters with the proper explosives, blasting supplies, and equipment necessary to conduct all daily operations for the duration of this project. The licensed Users shall comply with all state and federal explosive

regulations, and ensure all blasters conduct explosive disposal operations in accordance with all regulations and industry safety practices.

By regulatory definition: *"User"*—a person who as an ultimate consumer of an explosive, purchases the same from a dealer-distributor or manufacturer or means a dealer or manufacturer who uses an explosive as an ultimate consumer.

ESI also has the highest class of explosive license available through the LSP, a "Manufacturer" license. All licensed Blaster's and User's fall under the direct control of ESI's "Manufacturer" license. ESI shall provide, for the duration of this project, a valid "Manufacturer" license that shall be the ultimate authority for all licensed ESI personnel at Camp Minden. The "Manufacturer" licensee shall be the Senior Project Advisor and shall ensure that all licensed personnel conduct explosive operations in accordance with all state and federal regulations, as well as, in accordance with best industry safety practices.

By regulatory definition: *"Manufacturer"*—a person engaged in the manufacture, compounding, or combining of explosives.

Federal License Requirement- Bureau of Alcohol, Tobacco, Firearms and Explosives (ATFE)

ESI also possesses a "Manufacturer of High Explosives" license issued through ATFE. ATFE requires that the principle owners of an explosive company possess a "Responsible Person" federal explosive license and all personnel working for a federally licensed company obtain an "Employee Possessor" federal explosive license. In accordance with all federal explosive regulations, ESI currently possesses all aforementioned licenses for all personnel currently employed by ESI. ESI will maintain all federal explosive licenses for the duration of this project at Camp Minden.

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives

Federal Explosives License/Permit
(18 U.S.C. Chapter 40)

In accordance with the provisions of Title XI, Organized Crime Control Act of 1970, and the regulations issued thereunder (27 CFR Part 555), you may engage in the activity specified in this license or permit within the limitations of Chapter 40, Title 18, United States Code and the regulations issued thereunder, until the expiration date shown. **THIS LICENSE IS NOT TRANSFERABLE UNDER 27 CFR 555.53.** See "WARNINGS" and "NOTICES" on reverse.

For ATF Correspondence To: ATF - Chief, FELC 244 Needy Road Martinsburg, WV 25405-9431	License/Permit Number: **5-LA-033-20-7F-00186**
Chief, Federal Explosives Licensing Center (FELC): Christopher R. Reers	Expiration Date: **June 1, 2017**

Name
WILLIAM T POE & ASSOCIATES

Premises Address (Changes? Notify the FELC at least 30 days before the move.)
1214 N. CICERO AVE
BATON ROUGE, LA 70816-

Type of License or Permit
20 MANUFACTURER OF EXPLOSIVES

Purchasing Certification Statement
The licensee or permittee named above shall use a copy of this license or permit to verify a transferor of explosives to verify the identity and the licensed status of the licensee or permittee as provided by 27 CFR Part 555. The signature on each copy must be an original signature. A faxed, scanned or emailed copy of the license or permit with a signature intended to be an original signature is unacceptable. The signatory must be that of the Federal Explosives Licensee (FEL) or a responsible person of the FEL. I certify that this is a true copy of a license or permit issued to the licensee or permittee named above to engage in the business or operations specified above under "Type of License or Permit."

Licensee/Permittee Responsible Person Signature _____ Position/Title _____

Printed Name _____ Date _____

Previous Editions Obsolete

(Mailing Address Changes? Notify the FELC of any changes.)

EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POE & ASSOCIATES
8818 BARINGER FOREMAN RD
BATON ROUGE, LA 70809

ATF Form 5400.14/5400.15 Part 1
Revised October 2011

Federal Explosives License (FEL) Customer Service Information

Federal Explosives Licensing Center (FELC)
244 Needy Road
Martinsburg, WV 25405-9431

Toll-Free Telephone Number: (877) 283-3352
Fax Number: (304) 616-4401
E-mail: FELC@atf.gov

ATF Homepage: www.atf.gov

Change of Address *(27 CFR 555.54(b)(1))* Licensees or permittees may during the term of their current license or permit move their business or operations to a new location at which they intend to carry on such business or operations. The licensee or permittee is required to give notification of the new location of the business or operations not less than 10 days prior to such removal with the Chief, Federal Explosives Licensing Center. The license or permit will be valid for the remainder of the term of the original license or permit. **(The Chief, FELC, shall, if the licensee or permittee is not qualified, refer the request for amended license or permit to the Director of Industry Operations for denial in accordance with § 555.54.)**

Right of Succession *(27 CFR 555.59)* (a) Certain persons other than the licensee or permittee may assume the right to carry on the same explosive materials business or operations at the same address shown on, and for the remainder of the term of, a current license or permit. Such persons are: (1) The surviving spouse or child, or executor, administrator, or other legal representative of a deceased licensee or permittee; and (2) A receiver or trustee in bankruptcy, or an assignee for benefit of creditors. (b) In order to secure the right provided by this section, the person or persons continuing the business or operations shall furnish the license or permit for that business or operations for endorsement of such succession to the Chief, FELC, within 30 days from the date on which the successor begins to carry on the business or operations.

(Continued on reverse side)

Cut Here

Federal Explosives License/Permit (FEL) Information Card

License/Permit Name: EXPLOSIVE SERVICE INTERNATIONAL

Business Name: WILLIAM T POE & ASSOCIATES

License/Permit Number: 5-LA-033-20-7F-00186

License/Permit Type: 20-MANUFACTURER OF EXPLOSIVES

Expiration: June 1, 2017

Flame Note: Not Valid for the Sale or Other Disposition of Explosives

State of Louisiana

State Licensing Board for Contractors

This is to Certify that:

EXPLOSIVE SERVICES INTERNATIONAL, LTD.
9985 Baringer Foreman Road
Baton Rouge, LA 70809

is duly licensed and entitled to practice the following classifications

SPECIALTY: DEMOLISHING WORK; SPECIALTY: HAZARDOUS WASTE TREATMENT OR REMOVAL

Witness our hand and seal of the Board dated,
Baton Rouge, LA 31st day of December 2014

Director

Chairman

Secretary-Treasurer

Expiration Date: July 18, 2016

License No: 23855

This License Is Not Transferrable

WILLIAM TATE POE

Responsible Person Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: **5LA00186**

05/08/2014

SUBJECT: **RESPONSIBLE PERSON LETTER OF CLEARANCE for:**

WILLIAM TATE POE	10/29/1942 435603579
PRESIDENT	4335 TOMHOUSE 51
(225)275-2152	PRAIRIEVILLE, LA 70769

and is ONLY valid under the following federal explosives license/permit:

6-LA-033-20-7E-00186 EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POE & ASSOCIATES
1214 N. CICERO AVE
BATON ROUGE, LA 70816

Dear WILLIAM POE:

You have been approved as a responsible person under the above listed Federal explosive license or permit. You may lawfully direct the management or policies of the business or operations as they pertain to explosives. You may also lawfully transport, ship, receive or possess explosive materials incident to your duties as a responsible person. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304-616-4401
Chief, FELC
Attn: LOC Correction

Call toll-free: 1-877-283-3352

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections

Public Safety Services

09/21/2012

Explosive Service International Ltd. (E.S.I.)
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE. Manufacturer
ISSUED TO. William T Poe
SSN #. 435-60-3579

LICENSE NUMBER: M00000081
COMPANY #: C10000149

In consideration of a regulatory fee of $ 700 dollars:

Permission is granted to engage in the business of manufacturer of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **September 2016**.

This license is not transferable and is revocable for cause

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

WILLIAM JASON POE

Responsible Person Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

9010090: CRR/TLS
5400
File Number: SLA00186

05/06/2014

SUBJECT: RESPONSIBLE PERSON LETTER OF CLEARANCE for:

WILLIAM JASON POE 11/30/1971 438170915
VICE PRESIDENT
(225)275-2162
9820 E WINDING RIDGE DR
PRAIRIEVILLE, LA 70769

and is ONLY valid under the following Federal explosives license/permit:
5 LA 033-90-YE-00186 EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POE & ASSOCIATES
1211 N. CICERO AVE
BATON ROUGE, LA 70816

Dear WILLIAM POE,

You have been approved as a responsible person under the above-listed Federal explosive license or permit. You may lawfully direct the management or policies of the business or operations as they pertain to explosives. You may also lawfully transport, ship, receive or possess explosive materials incident to your duties as a responsible person. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1 304 616 4401
Chief, FELC
Attn: LOC Correction

Call toll-free: 1 877 283-3352

WWW.ATF.GOV

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections

Public Safety Services

05/02/2013

Explosive Service International Ltd. (E.S.I.)
PO Box 45742
Baton Rouge LA 70895 - 0060

EXPLOSIVES LICENSE

LICENSE TYPE: User
ISSUED TO: William Jason Poe
SSN #: 438-17-4915

LICENSE NUMBER: U000004050
COMPANY #: C10000149

In consideration of a regulatory fee of $ 300 dollars:

Permission is granted to be a user of explosives as defined in R.S. 40:1471 in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **May 2017**.

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections

Public Safety Services

10/11/2011

Explosive Service International
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: David William Wear
SSN #: 464-85-0443

LICENSE NUMBER: B00010509
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:

Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **October 2015** .

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

[illegible]

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: 5LA00186

08/08/2014

SUBJECT: EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:

DAVID WILLIAM WEAR 08/27/1981 464850443

EXPLOSIVE TECHNICIAN
(817)688-1685

1508 MARIE TERRACE
ARLINGTON, TX 76010

and is ONLY valid under the following Federal explosives license/permit:

5 LA-033-20-7E-00186 EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POE & ASSOCIATES
1214 N. CICERO AVE
BATON ROUGE, LA 70816

Dear DAVID WEAR:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn.: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304 616-4401
Chief, FELC
Attn.: LOC Correction

Call toll-free: 1-877-283-3352

WWW.ATF.GOV

Employee Possessor Letter of Clearance for: DAVID WILLIAM WEAR

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections
Public Safety Services

01/08/2015

Explosive Service International Ltd. (E.S.I.)
9985 Barringer Foreman Road
Baton Rouge LA 70809 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Timothy Paul Cardaronella
SSN #: 439-69-1240

LICENSE NUMBER: B00014372
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:
Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **January 2019** .

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

TIMOTHY PAUL CARDARONELLA

Employee Possessor Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: 5LA00186

08/18/2011

SUBJECT: **EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:**

TIMOTHY PAUL CARDARONELLA 03/31/1976 439691240

EXPLOSIVE TECHNICIAN
(985)960-8321

562 NOTOBBY LANE
AMITE, LA 70422

and is ONLY valid under the following Federal explosives license/permit:

5-LA-033-20-4F-00186 EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POE & ASSOCIATES
1214 N. CICERO AVE
BATON ROUGE, LA 70816

Dear TIMOTHY CARDARONELLA:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn.: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304-616-4401
Chief, FELC
Attn.: LOC Correction

Call toll-free: 1-877 283 3952

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections

Public Safety Services

12/04/2014

Explosive Service International Ltd (E.S.I.)
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Salvador Joseph Castagnetta Jr
SSN # 439-88-6925

LICENSE NUMBER: B00014296
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:

Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **December 2018**.

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections

Public Safety Services

03/13/2012

Explosive Service International Ltd. (E.S.I.)
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Russell Edward Coolman
SSN #: 433-45-2928

LICENSE NUMBER: B00011123
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:

Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **March 2016** .

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Muse
Commander, Emergency Services Unit
Louisiana State Police

RUSSELL EDWARD COOLMAN

Employee Possessor Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: **SLA00186**

05/08/2014

SUBJECT: **EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:**

RUSSELL EDWARD COOLMAN 05/12/1968 433452928

EXPLOSIVE TECHNICIAN
(318)308-0522

[redacted] QUEEN ST STREET,
OAKDALE, LA 71417

and is ONLY valid under the following Federal explosives license/permit:

5-LA-033 20YE-00186

EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM TIPPE & ASSOCIATES
1214 N. CIGELHOUSE
BATON ROUGE, LA 70816

Dear RUSSELL COOLMAN:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn.: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304-616-4401
Chief, FELC
Attn.: LOC Correction

Call toll-free: 1-877-283-3352

BOBBY JINDAL,
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections
Public Safety Services

10/11/2011

Explosive Service International
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Rodney R McManus
SSN #: 436-74-9139

LICENSE NUMBER: B00010512
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:
Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **October 2015** .

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

RODNEY ROSS MCMANUS

Employee Possessor Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: **5LA00186**

05/03/2014

SUBJECT: **EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:**

RODNEY ROSS MCMANUS 03/07/1959 436749139

EXPLOSIVE TECHNICIAN
(318)447-7[illegible]
156 NELMS LOOP,
[illegible], LA 71417

and is ONLY valid under the following federal explosives license/permit:

5-LA-033-20-7[illegible]
EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T. POE & ASSOCIATES
1214 N. CYPRESS AVE
BATON ROUGE, LA 70816

Dear RODNEY MCMANUS:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304-616-4401
Chief, FELC
Attn.: LOC Correction

Call toll-free: 1-877-283-3352

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections

Public Safety Services

01/03/2012

Explosive Service International
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Richard C Crain
SSN #: 438-60-0540

LICENSE NUMBER: B00010799
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:

Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **January 2016** .

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

RICHARD CLOID CRAIN

Employee Possessor Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: 5LA00186

06/06/2014

SUBJECT: EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:

RICHARD CLOID CRAIN 01/14/1943 438600540

INSTRUCTOR [illegible] TECHN[illegible] 246
(318)729-62[illegible] [illegible], LA 71417

and is ONLY [illegible] explosives license/permit:
6-LA-033-20-[illegible] [illegible] INTERNATIONAL
[illegible] ASSOCIATES
1214 N. CICERO [illegible]

Dear RICHARD CRAIN:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn.: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304-616-4401
Chief, FELC
Attn.: LOC Correction

Call toll-free: 1-877-283-3352

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections

Public Safety Services

10/11/2013

Explosive Service International
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: User
ISSUED TO: Ray Thomas Williamson
SSN #: 434-21-8427

LICENSE NUMBER: U00003454
COMPANY #: C10000149

In consideration of a regulatory fee of $ 300 dollars:

Permission is granted to be a user of explosives as defined in R.S. 40:1471 in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **October 2015**.

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

D/SSP-4113

RAY THOMAS WILLIAMSON

Employee Possessor Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: **5LA00186**

05/08/2014

SUBJECT: **EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:**

RAY THOMAS WILLIAMSON 12/09/1958 434218427

EXPLOSIVE TECHNICIAN
(504)341-1485

1738 DONNIE ANN DRIVE
MARRERO, LA 70072

and is ONLY valid under the following Federal explosives license/permit:

5-LA-033-20-7C-00186 EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POE & ASSOCIATES
1211 N. CICERO AVE
BATON ROUGE, LA 70815

Dear RAY WILLIAMSON:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn.: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304-616-4401
Chief, FELC
Attn.: LOC Correction

Call toll-free: 1-877-283-3352

WWW.ATF.GOV

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections

Public Safety Services

10/12/2011

Explosive Service International
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Shawn Michael Campbell
SSN #: 436-23-2972

LICENSE NUMBER: B00010520
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:

Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **October 2015**.

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

SHAWN MICHAEL CAMPBELL

Employee Possessor Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: **SLA00186**

06/06/2014

SUBJECT: **EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:**

SHAWN MICHAEL CAMPBELL 08/28/1965 436232972

EXPLOSIVE TECHNICIAN
(318)446-6801

7961 HWY 159
COLFAX, LA 71417

and is ONLY valid under the following Federal explosives license/permit:

5-LA-033-20-7C-00186

EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POE & ASSOCIATES
1214 N. CICERO AVE
BATON ROUGE, LA 70816

Dear SHAWN CAMPBELL:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your 'Letter of Clearance' is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn.: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304-616-4401
Chief, FELC
Attn.: LOC Correction

Call toll-free: 1-877-283-3352

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections
Public Safety Services

01/08/2015

Explosive Service International Ltd. (E S I)
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Kenyon Lee Williams
SSN #: 478-62-5568

LICENSE NUMBER: B00014371
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:
Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **January 2019** .

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

DPSSF-017

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections
Public Safety Services

10/11/2011

Explosive Service International
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Jeremy R Bulls
SSN #: 436-53-9205

LICENSE NUMBER: B00010511
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:

Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **October 2015**.

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

JEREMY ROSS BUTTS

Employee Possessor Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: **5LA00186**

05/06/2014

SUBJECT: **EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:**

JEREMY ROSS BUTTS	**08/31/1980**
EXPLOSIVE TECHNICIAN	11492 HWY 71
(318)613-4117	DOLIN, LA 71417

and is ONLY valid under the following Federal explosives license/permit:

5 LA 1333 20 7F 00186 EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POE & ASSOCIATES
1214 N. CICERO AVE
BATON ROUGE, LA 70816

Dear JEREMY BUTTS:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn.: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304 616-4401
Chief, FELC
Attn.: LOC Correction

Call toll-free: 1 877-283-3352

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections
Public Safety Services

10/11/2012

Explosive Service International Ltd. (E S I)
PO Box 45742
Baton Rouge LA 70895-1888

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Hosea Daniel Willie Jr.
SSN #: 433-49-8584

LICENSE NUMBER: B00011878
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:

Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from thereof to and including the last day of **October 2016**

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

HOSEA DANIEL WILLIE

Employee Possessor Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

901090: CRR/FLS
5400
File Number: 5LA00186

08/08/2014

SUBJECT: EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:

HOSEA DANIEL WILLIE **06/12/1975** **433498584**

EXPLOSIVE TECHNICIAN
(985)969-1967

15168 OLD GENESSEE RD
TICKFAW, LA 70466

and is ONLY valid under the following Federal explosives license/permit:

5 LA-033-20-7F-00186

EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POF & ASSOCIATES
1214 N. CICERO AVE
BATON ROUGE, LA 70816

Dear HOSEA WILLIE:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

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Chief, FELC
Attn.: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304-616-4401
Chief, FELC
Attn.: LOC Correction

Call toll-free: 1-877-283-3352

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BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections

Public Safety Services

09/25/2013

Explosive Service International Ltd. (E.S.I.)
PO Box 45742
Baton Rouge LA 70895 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: Blaster
ISSUED TO: Dean Stuart Schellhase
SSN #: 434-23-8211

LICENSE NUMBER: B00013044
COMPANY #: C10000149

In consideration of a regulatory fee of $ 200 dollars:

Permission is granted to engage in the occupation of blaster of explosives in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **September 2017**.

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

DEAN STUART SCHELLHASE

Employee Possessor Letter of Clearance for:

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
Federal Explosives Licensing Center
244 Needy Road
Martinsburg, West Virginia 25405

900090: CRR/TLS
5400
File Number: **5LA00186**

05/08/2014

SUBJECT: **EMPLOYEE POSSESSOR LETTER OF CLEARANCE for:**

DEAN STUART SCHELLHASE 10/15/1966 434238211

CONSULTANT/EXPLOSIVE TECHNICIAN
(225)677-9993

18642 SPANISH OAKS BLVD
PRAIRIEVILLE, LA 70769

and is ONLY valid under the following federal explosives license/permit:

5-LA-039-20-7E-00186

EXPLOSIVE SERVICE INTERNATIONAL
WILLIAM T POE & ASSOCIATES
1214 N CICERO AVE
BATON ROUGE, LA 70819

Dear DEAN SCHELLHASE:

You have been approved to transport, ship, receive or possess explosive materials as an employee possessor under the Federal explosive license or permit indicated above. **This clearance is only valid under the license or permit referenced above.**

Sincerely,

Christopher R. Reeves

Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)

FELC Customer Service. If you believe that information on your "Letter of Clearance" is incorrect, please return a COPY of the letter to the Chief, Federal Explosives Licensing Center (FELC), with a statement showing the nature of the error. The Chief, FELC, shall correct the error, and return an amended letter to you.

Mail: ATF
Chief, FELC
Attn: LOC Correction
244 Needy Road
Martinsburg, West Virginia 25405

Fax: 1-304-616-4401
Chief, FELC
Attn: LOC Correction

Call toll-free: 1-877-283-3352

BOBBY JINDAL
GOVERNOR

MICHAEL D. EDMONSON, COLONEL
DEPUTY SECRETARY

State of Louisiana

Department of Public Safety and Corrections
Public Safety Services

12/04/2014

Explosive Service International Ltd. (E.S.I.)
9985 Barringer Foreman Road
Baton Rouge LA 70809 - 0000

EXPLOSIVES LICENSE

LICENSE TYPE: User
ISSUED TO: Frank Joseph Czajkowski
SSN #: 220-46-0836

LICENSE NUMBER: U00004474
COMPANY #: C10000149

In consideration of a regulatory fee of $ 300 dollars:
Permission is granted to be a user of explosives as defined in R.S. 40:1471 in accordance with the rules and regulations promulgated pursuant thereto and the conditions of the approved application on file with the Department of Public Safety for the period from hereof to and including the last day of **December 2018** .

This license is not transferable and is revocable for cause.

Questions or concerns regarding the issuance of this license may be directed to the Explosives Control Unit at telephone (225) 925-6113 Ext. 215.

Captain Taylor Moss
Commander, Emergency Services Unit
Louisiana State Police

Appendix J: Belgium Pollution Abatement System Emissions

CC R&A - INES
Start of system:23.01.2013 13:33 979

DAY PROTOCOL Incineration
Time of printing: 11.06.2013 24:00

Component Dimension	Temperature °C	Humidity Vol%	Pressure hPa	O2 Vol%	Flow Nm3/h	CO mg/Nm3
Day values	98,59	5,16	992,64	14,92	3486,59	1,73
val.daily averages						0,00
Day limit values						50,00
Month values	97,61	4,44	982,50	15,76	4140,15	0,74
Year values	25,12	1,05	1001,02	19,68	8?0,00	-5,38
Emissions						kg
Day						0,16
Month						0,27
Year						1,13

Component Dimension	NOx mg/Nm3	SO2 mg/Nm3	HCl mg/Nm3	TOC mg/Nm3	HF mg/Nm3	Dust mg/Nm3
Day values	0,35	3,23	-0,01	0,41	0,12	0,09
val.daily averages	0,00	0,00	0,00	0,00	0,00	0,05
Day limit values	200,00	50,00	10,00	10,00	1,00	10,00
Month values	10,57	1,34	-0,01	0,60	0,05	-0,14
Year values	-18,27	-4,70	-0,25	14,81	0,18	0,37
Emissions	kg	kg	kg	kg	kg	kg
Day	0,05	0,15	0,00	0,05	0,01	0,01
Month	11,57	0,35	0,00	0,19	0,02	0,01
Year	34,11	1,34	0,05	0,48	0,09	0,06

Component Dimension	COlOmin mg/Nm3
Day values	3,56
val.daily averages	0,00
Day limit values	
Month values	1,52
Year values	-3,17
Emissions	kg
Day	0,15
Month	0,27
Year	1,12