Evaluation of the Proposed Contained Burn System Against the Dialogue Committee Facilitators' Report

13 Attributes	Contained Burn System
1. Select a Proven Technology • Should be a mature technology that has been successfully implemented elsewhere meeting stringent performance standards and emission controls • Should have demonstrated effectiveness on M6 or a closely related material • Data needs to include real performance on real projects on a daily basis demonstrating a high level of confidence in the technology	The technology is proven. Thermal destruction has been used for propellants and other energetic materials such as flammables and oxidizers. The Contained Burn System (CBS) has been used to destroy M6 and other propellants. The vendor's management team has over 250 years of combined experience in disposal of explosives. See Attachment 1 See Attachment 2
2. Meet the Highest possible standard for emissions • Put a cap on total non-methane organic carbon emissions (this is described in detail in the description the following this list) • Identify all emission products and concentration levels • On-site EPA/DEQ environmental quality officer • Open burning is not an option	The CBS has been shown to meet the strict standards of the NAAQS, the State has selected optional air pollution equipment to match the highest protection of any of the proposals. The air pollution equipment includes: a particulate cyclone, gas cooler, baghouse, a high temperature afterburner, high efficiency particulate arrestance (HEPA) filters, and a selective catalytic reduction (SCR) device. EPA and LDEQ will provided independent oversight of the operations at Camp Minden.
3. Monitor everything. • Hold, Test and Releases strongly preferred • Continuous monitoring at all points of possible emissions.] • Community monitoring • Detailed data plan with community access to all data	The Continuous Emissions Monitoring Plan will be prepared by the Vendor. The monitoring of the CBS will include the taking measurements at the stack. The Continuous Emissions Monitoring System (CEMS) will be used to control the parameters of the operations. The CBS is a batch operation and data from earlier burns will be used to improve subsequent burns. The CBS is expected to be able to burn 880 pounds per burn and 3 burns per hour. In addition to the CEMS and other data collection at the CBS, air monitoring and sampling will also be conducted in various communities. CEMS for CO, THC, NOx, O2, and Stack gas flow rate will be required.

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	EPA data will be provided and will be available on-line at the EPA Camp Minden webpage. A link to the LMD website will also be on the EPA website.
4. Get it done in time • Start-up time has to allow time for testing and validation • Demonstrate capacity and throughput to ensure work is completed on time • The preference of the community would be to complete cleanup with 24 months from March 2015 • Preference for short-term or interim action that might hand the most hazardous materials while full-scale operation is constructed • Identify realistic backup plans	The CBS will incorporate start up and testing as the system begins to operate. Fabrication and construction of the CBS will require approximately 5 months. They further estimated that it should be completed in 9 to 10 months after operations have begun. The operations are predicted to be able to handle 60,000 pounds per day working 24/7.
5. Control Risk of PCDD/F, hazardous air pollutants, and other persistent organic pollutants • Do not burn or treat packaging in the overall process • Explore the risks of dioxin production • Preference for technologies which minimize the risk of de novo synthesis	There is little risk of dioxin and furans being formed from the destruction of the M6 or CBI alone. The risk of formation of dioxins and furans may be increased by including the packaging materials, therefore the plans call for not burning the packaging materials and disposing them in a properly permitted facility, including the possibility of reuse or recycle. The only exception will be on the rare occasion when, for safety reasons, will it be necessary to burn some packaging material with the M6. The sampling analyses will include dioxin as a precautionary measure.
6. Leave nothing behind • All installed equipment must be completely removed • No waste of residue left on Camp Minden • In accordance with the AOC, the property will be returned to its original condition	The vendor will remove all equipment. All waste will be appropriately handled and disposed in properly permitted facilities. Restoration and confirmatory samples will be taken and reported to the public.

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7. Control all risks of spills or releases • Prepare the site so that any possible spills are contained, and secondary containment is not created	The design of the CBS includes containment of potential spills. A Spill and Emergency Response Contingency Plan will also be developed by LMD and will be provided to the public. The pad will be constructed to control or prevent run-on and run-off of water. Fugitive air emissions are controlled by the induced draft fan that creates a negative pressure inside the system.
8. Limit the creation of waste • Minimize volume of waste compared to the original volume of material (overall reduction of volume) • Technology does not create high levels of material that has to be disposed as waste. • Seek to maximize the potential for reuse and recycling • Come up with a plan to dispose of the packaging.	The CBS process produces minimal waste. All waste from combustion will removed and disposed in a properly permitted facility. The packaging, which includes, pallets, supersacks, fiber drums, and boxes are all considered waste and will not be burned but disposed in a properly permitted facility. The only exception will be the rare occasion when, for safety reasons, will it be necessary to burn some packaging material with the M6.
9. Focus on safety and health • Worker safety and health • Community safety and health • Strong safety /health planning and training • Contingency plans	The health and safety is the primary objective of this action and the same standards from the vendors will be required. The vendors have good safety records and have ample experience working explosives. The vendor is familiar with both environmental and safety requirements regarding ordnance and explosive wastes. The vendor will make their safety record available to the public. The vendor specializes in environmental controls and has developed and fielded technology which easily meets the most stringent regulatory standards.
10. Focus on stability • Stability monitoring to ensure worker safety • Clean materials handling methodology with experienced organization to manage on-site handling	Temperature will be monitored as well as other conditions to help prioritize the disposal of the material. Remote thermometers and thermal imagers will be used. The vendor will perform a prioritization/ranking of all the magazines based on several factors, primarily removing the

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• Look for opportunities to evaluate stability and organize material for worst first • Evaluate possibility to separate 50 pound boxes which may have greater stability as per December 2014 TAV (if potential use exist) • Follow prioritization outlined in the December 2014 TAV if feasible	threat to people. It can be adjusted as the conditions change and as more information becomes available.
11. Continuous communication to community • Immediate community access to data as it is produced • Real-time on-line as feasible • Regular updates • Live video feeds • Planned organized tours and explanations throughout the disposal process • Citizens Advisory Group	The responsibility for this remains with EPA, LDEQ, and LMD. The vendor will be required to participate in this activity. The LMD and EPA have the responsibility for community communication in coordination with LDEQ. EPA has worked with the community to help establish a Community Advisory Group.
12. Consider a strong prime with the potential for multiple technologies • There is a possibility that more than one treatment technology could be implemented, either for reasons of speed or to treat different waste streams with different technologies • Any vendor will have to manage a lot of moving parts to get this right	The technology selected can handle a variety of conditions. The technology has the capability to treat both M6 and CBI. See Attachment 2
13. Explore potential recycling/reuse approach • This option was not explored by the Committee and no Vendor came forward with this idea, but the evaluation should be open to	The vendor will attempt to arrange reuse of other non-propellant waste such as packaging, as appropriate, and in a manner that does not harm the environment or the public.

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one should a proven, reliable technology exist • Any such proposal should demonstrate the ability to comply with all other requirements, have a bona fide final destination for the material, and be subject to continual inspections by EPA/DEQ or appropriate regulators. Jurisdiction at the final destination must have environmental and health regulations and enforcement on par with those of the U.S.	