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Title: Contingency Basing Integration Technology Evaluation Center – An Experimental Contingency Base at Fort Leonard Wood To Promote Sustainable Design and Construction

Abstract Text: Contingency forward operating bases are sustained through long and often vulnerable supply lines. Nearly all base command, combat and support systems are dependent on petroleum based fuel, either directly or indirectly through power generation. The cost of fuel, in terms of lives and money, can be costly. It is imperative that contingency bases reduce their energy demand and reduce the dependence on fossil fuels. Improving the efficiency of base camp systems such as power generation, water consumption and waste treatment, we can improve sustainability and reduce base vulnerability.

To ensure potential contingency base technologies are suitable for acquisition and deployment to forward areas, they must be thoroughly tested in realistic conditions under full soldier loads. The Contingency Base Integration Technology Evaluation Center (CBITEC) is a new facility under construction at Fort Leonard Wood, Missouri that will provide this testing and evaluation platform. CBITEC is designed to replicate a forward operating base and all of its systems while being also used as a training facility for units, staffs and leaders. This provides realistic conditions and loads to evaluate potential power, water production and waste treatment technologies.

CBITEC will initially be built to accommodate 150 soldiers with a planned expansion to 600. This makes the facility unique in size and its ability to evaluate semipermanent power, water, and waste systems, as well as construction materials and techniques. CBITEC will also incorporate renewable energy such as wind and solar. The initial base design includes B-Huts, showers, latrines, dining facility, smart generators, solar photo-voltaic array with battery storage, and solar water heaters. The camp will be fully instrumented and monitored to determine real time power and water demands critical to technology evaluation. Once operational, the CBITEC staff will seek technologies ready for testing and evaluation from both government and industry.

CBITEC has the added benefit of providing a training venue for units and leaders to teach base camp sustainability principles. It also provides a realistic facility to train base camp management staffs prior to deployment. Previously, these staffs had no location to conduct this critical pre-deployment training.