Abstract Submitted for the SHOCK07 Meeting of The American Physical Society

Non-Shock Initiation of Plastic Bonded Explosive: Experimental and Theoretical methods I KARMEN LAPPO — The goal of this research is to develop an empirical matrix that relates the level of damage created by an impulsive load on an explosive to the level of violence it produces — confined or unconfined. To develop this matrix, the first phase of the research will focus on relating the projectile velocity to a level of violence. The second phase will then relate the projectile velocity to a level of damage. This will then link the level of damage to the level of violence based on the projectile velocity. The third and final phase is to implement the data into a computational model and then validate its ability to simulate impact scenarios of explosives, explosive components, and explosive systems.

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