

A Rain of Fire

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Twenty hundred hours comes and goes. As the last rays of the sun fade and flicker out, darkness slowly cloaks the secluded mountain crags and rocky slopes of the mountain pass. Soldiers occupying static defensive battle positions at a strongpoint shiver in the chilly night air.

The mountain pass these soldiers guard has become a point of contention over the past month. This particular chokepoint represents the most direct approach to the valley below.

The responsibility for the defense of

this mountain pass rests with the battalion task force commander. He intends to establish and maintain control of the area. He must deny the enemy access to the valley floor where vital communication and supply links exist.

The commander has positioned individual and crew-served weapons to provide the most concentrated fire possible in high-risk areas leading into the unit's defenses. Concertina wire encircles the battle positions. Early warning devices and listening posts stand ready. The commander's soldiers have worked hard to establish this strongpoint astride the mountain pass.

The task force commander has selected exploding flame field expedients (FFE) for added firepower in concert with existing organic weapons. He intends to stop the enemy

short of the pass, canalize his movement, and destroy him.

Trained troops, under the watchful eyes of their NCOs, have prepared explosive charges, filled sandbags, dug emplacements, and laid and tested firing wire. Ultimately, several exploding FFE devices are primed for command detonation. The fire plan for the strongpoint includes fire and maneuver with conventional assets, augmented by the explosive power of the FFE devices.

From a defensive point of view, the battalion task force now has an excellent opportunity to stall the attacker's momentum and present him with an unexpected, psychologically terrifying experience.

Under the cover of darkness, the enemy commander quietly moves his forces to within striking distance of the mountain pass. His assault troops



Soldiers position a drum of fuel to prepare a camouflaged directional flame fougasse, a defensive weapon designed to fire in a predetermined direction to protect a defensive perimeter.



pound the defensive positions with a relentless fusillade of small arms fire along with artillery and mortars.

Enemy soldiers rush forward in an attempt to overwhelm the defenders. Elements of Alpha and Charlie companies are the hardest hit. Suddenly, they are heavily engaged by a numerically superior force.

The task force commander throws every available asset into the fray. The volume of fire builds. Enemy soldiers

close to within fifty meters of Alpha company's perimeter. Deafening explosions begin to split the night sky as the din reaches a crescendo. Again there's a thunderous blast. And again, scarlet fingers of flame leap skyward, reaching out from the exploding flame devices. A fiery death rains on a squad of enemy soldiers near the company's tactical wire. The stench of charred human flesh hangs in the air like a thick noxious veil. Screams of the wounded and dying echo into the darkness as the attack fails . . .

Although graphically described in

this simulated "war story," the scenario closely resembles the real thing. Actual combat is never pretty. However, killing one's enemy may, of necessity, be the only solution.

Nevertheless, the simple knowledge of the exorable power of one nation over another could have a calming effect on an uncontrolled passion for war.

Historians record the fact that fire, as a single source, produced more casualties during World War II than all other weapons combined. Fire storms that developed during the in-

A directional flame fougasse is shown at the moment of detonation.



cendriary raids over Europe razed numerous cities, reducing them to smoldering rubble.

Human fear of fire and the psychological damage it produces is one of the main reasons for fire's tactical success in combat. Changing times and technologies influence our approach to military operations. Still, the US Army must stand ready to react appropriately to a variety of situations and conditions.

Directional flame fougasse rains fire, death, and destruction to a range of 175 meters.



This readiness may serve only as a deterrent, but that in itself could forestall the outbreak of hostilities. Battle lines may not be drawn in the sense one would expect. The idea of facing concentrations of organized combat troops tends to diminish the fact that perhaps a paramilitary force of shadowy figures conducting "cut, slash, and run" operations may, in fact, be the actual foe. This foe most likely would confront our forces in a low-intensity arena.

The key in this situation is initiative. We must use the operational concepts

of the AirLand battle doctrine to concentrate on seizing the initiative to defeat the enemy. All low-intensity conflict (LIC) missions require accurate, up-to-date intelligence information. Since the Threat force can blend easily with the indigenous population of a region, it becomes vital that some means of identification be used to prevent unnecessary flame casualties among those friendly to our forces.

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Training units for LIC missions should include an understanding of the use of flame as a weapon—not simply the employment of fabricated FFE devices alone, but also packaged flame systems as well. The M202A1 66mm FLASH exemplifies a conventional flame weapon that could have application under unconventional tactical situations.

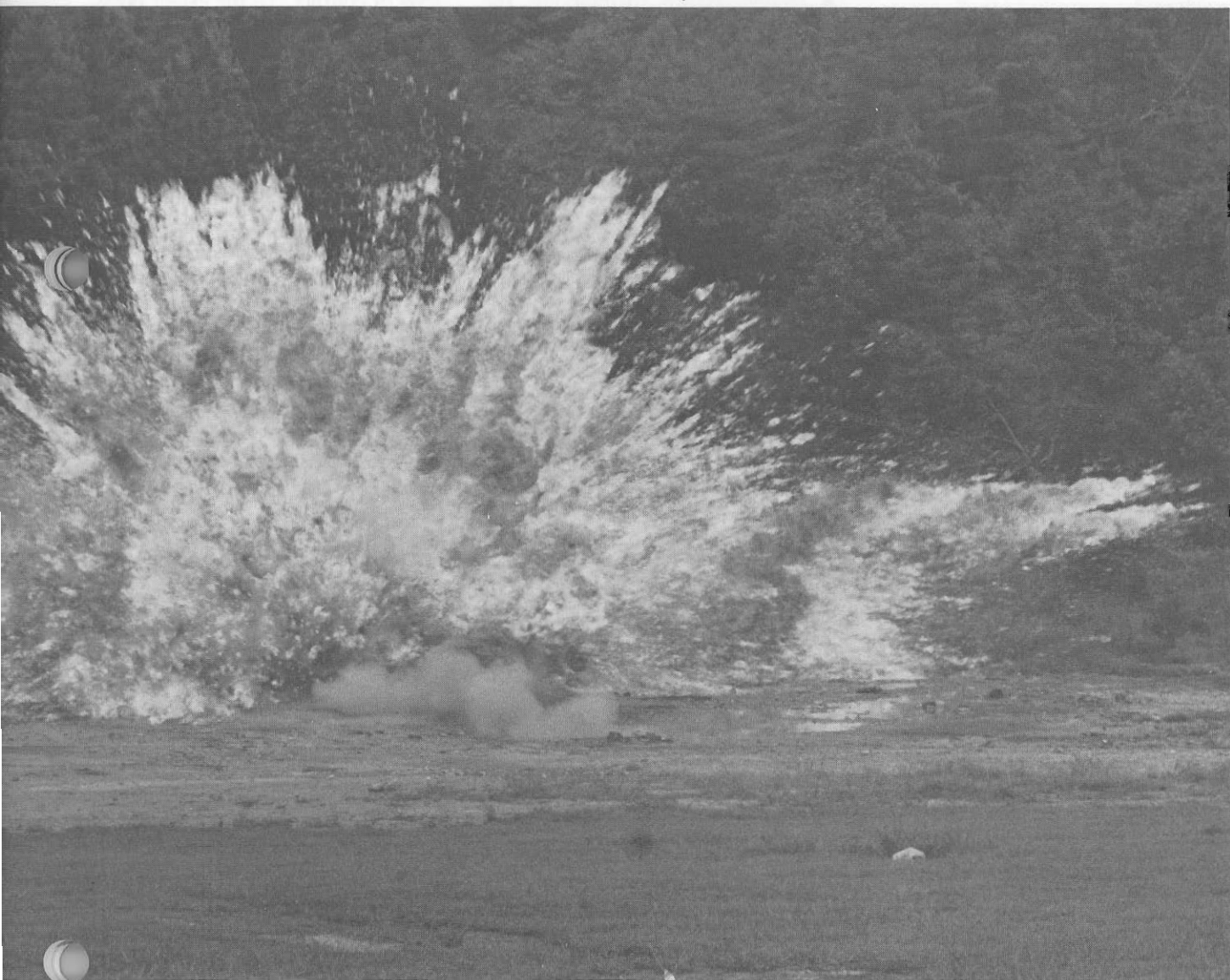
The development of other projected flame systems employing thickened pyrophoric agents (TPA) or substances that burn spontaneously upon impact or exposure to air would be

valuable weapons during LIC. Close range, “packaged” flame in the form of artillery and mortar rounds, as well as rockets, may seem exotic by today’s standards. However, modern day combat techniques that fall within the guidelines of the AirLand battle doctrine may be governed by intensity levels that go hand in hand with the use of flame weapons.

Strike campaigns provide a prime example. These undertakings by light force units adapt easily to the use of flame. Small, portable FFE devices such as the flame bunker bomb are

ideally suited for this type of combat. When operating in remote or isolated areas, strike forces could easily employ this small unobtrusive device to seal off border crossings or perhaps to attack infiltration routes.

This device, described in FC 3-11-1, Flame Field Expedients, dated March 1987, is nothing more than an ammunition can filled with flame fuel and primed with detonating cord. The device employs an M49 trip flare taped to the handle as an igniter. A nonelectric blasting cap, a length of time fuze, and an M60 fuze igniter are



joined together to form the method of initiation. The device can just as easily be detonated electrically. The bunker bomb is small enough to be carried by an individual soldier, emplaced, and fired on order.

. . . The defensive battle in the mountain pass ends. The battalion task force has successfully accomplished its mission and has been relieved. These soldiers can now revert to reserve status and take a much-needed rest.

Meanwhile, a strike force has been formed to pursue the fleeing enemy. Its mission is to locate and destroy the

insurgent forces and their base areas. The commander of the strike force decides to use flame bunker bombs. He orders the construction of ten of the small, portable devices, to be carried and employed once the enemy base camp is located.

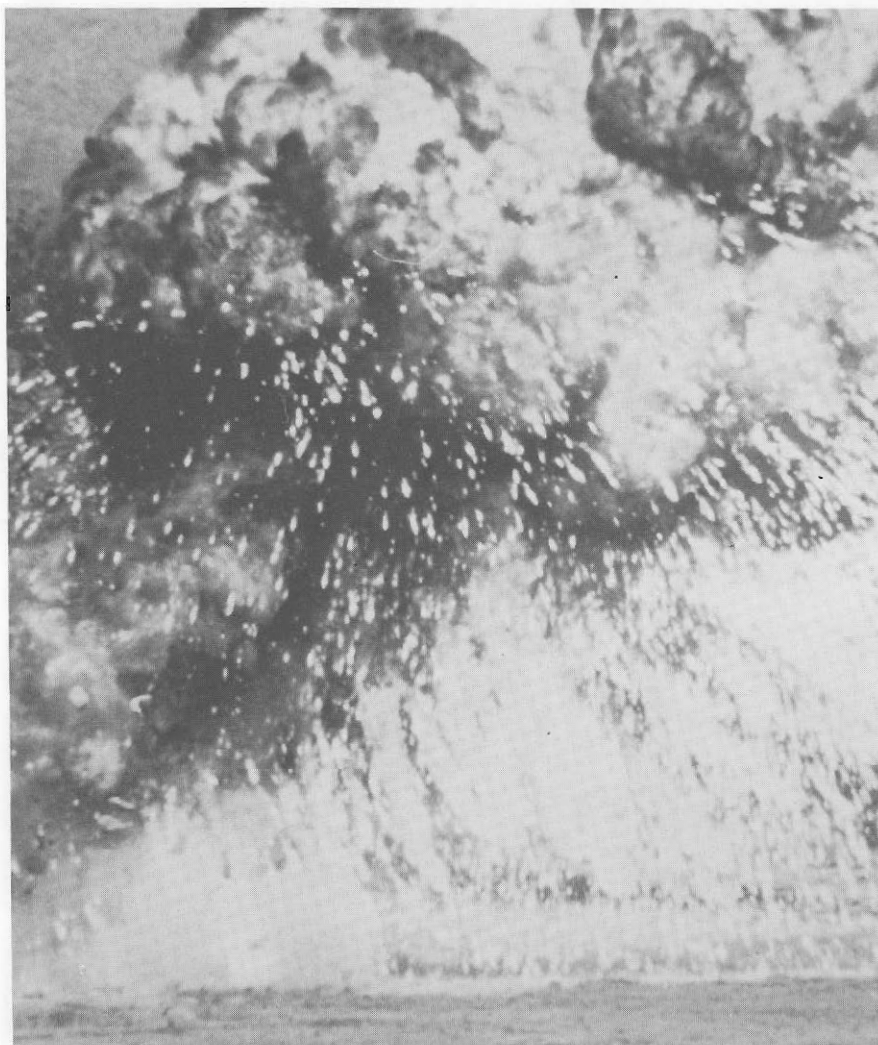
Two days pass and the insurgents are not found. It appears the enemy simply has melted into the countryside. The strike force is packing up to return to its base of operations when word comes over the radio. The enemy base has been sighted only two kilometers away.

Quickly, the commander organizes his troops for combat. They conduct a reconnaissance to pinpoint the enemy base area and test insurgent

dispositions and strengths. This is followed by a hasty attack to neutralize the enemy force. Once superiority of force is gained, the strike force commander employs the bunker bombs against the insurgent base facilities. Supplies, fuel storage, and ammunition and weapon stores are attacked with portable exploding flame devices. The remnants of the base camp are scant. The insurgent force, its equipment, supplies, and facilities have been destroyed.

The preceding vignettes show how flame can be employed during LIC operations. There are other combat uses for flame, depending upon the level of conflict. To the extent possible, commanders should consider the benefits derived from augmenting their existing firepower with flame. Urban areas, for example, lend themselves quite well to the use of flame weapons. The structural complexes of a city, such as transportation terminals, multi-story buildings, and subterranean facilities offer lucrative targets for projected type exploding flame packages. The LIC arena is often characterized by constraints on tactical methodology and the level of violence to be pursued. Under these conditions, flame can be employed in a counter-insurgency role to prey on the psyche of an enemy by exploiting his natural fear of fire.

As a single cause, fire produced more casualties during WWII than all other weapons combined.



Mr. Roger E. Boyd was one of the US Army Chemical Corps' authorities on flame warfare. He was a training instructor in the Smoke and Flame Division, NBC Proponency Training Department at the US Army Chemical School. His past assignments include airborne infantry company commander, battalion executive officer, and Corps chemical advisor to the Army, Republic of Vietnam (ARVN) IV Corps in the Mekong Deltas. Mr. Boyd is a graduate of the infantry officer basic course, chemical officer advanced course, and the US Army Command and General Staff College. He is a lieutenant colonel in the Army Reserve, with more than 30 years' service.