Demolition: Implosion, Blasting and Associated Liabilities

David A. Dial and Anna C., Palazzolo
Weinburg, Wheeler, Hudgins, Gunn & Dunn, LLC

Historically, the use of explosives in construction, mining and other fields triggered the imposition of strict liability for exercise of an ultra hazardous activity. Strict liability, as defined by Black’s Law Dictionary, is "liability without fault … when neither care nor negligence, neither good nor bad faith, neither knowledge nor ignorance will save the Defendant." However, in light of the technological advances made in the area of demolition, the use of explosives does not necessarily equate to an ultra hazardous activity. For example, the creation of demolition by implosion in 1970 introduced a safer, more controllable means of demolition. Since then, implosion has become a commonly used method to demolish structures in urban commercial areas. In fact, implosion is practiced in all 50 states and throughout the world. Because this modern method of demolition is much safer than traditional blasting methods, a strong argument exists that one who utilizes implosion should not be held to a strict liability standard.

This article will serve to articulate how the modern demolition technique of implosion is a safer and a more expedient means of removing erected structures. Further, this article will discuss why a contractor, engineer or owner employing implosion should not be presumed liable nor assume liability for any and all personal or property damage that may result.

The Use Of Explosives And Strict Liability

The theory of strict liability, or liability without fault, applies to one who engages in an ultra hazardous activity. The use of explosives generally has been deemed an ultra hazardous or abnormally dangerous activity. The doctrine of strict liability for an abnormally dangerous activity originated with Rylands v. Fletcher, L.R. 3 H.L. 330 (1868), affirming Fletcher v. Rylands, L.R.1 Ex. 265 (1866). Rylands involved damages caused by water escaping onto the plaintiff’s premises from a reservoir the defendant had constructed upon his own land. In finding the defendant property owner liable for the damage caused, the court set forth the following rule of law:

- A person who, for his own purposes, brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril, and if he does not do so, is prima facie answerable for all the damage which is the nature consequence of its escape.
- Since its inception, there have been countless decisions construing the application of strict liability for ultra hazardous activities. The American Law Institute adopted this doctrine in the Restatement of the Law of Torts. The Restatement of Torts 2d Section 519 "General Principal" provides:
  - one who carries on an abnormally dangerous activity is subject to liability for harm to the person, land or chattels of another resulting from the activity, although he has exercised the utmost care to prevent the harm;

this strict liability is limited to the kind of harm, the possibility of which makes the activity abnormally dangerous.

The Restatement of Torts 2d Section 520 "Abnormally Dangerous Activities" provides six factors that are considered in determining whether an activity is abnormally dangerous. These six factors are:

(a) existence of a high degree of risk of some harm to the person, land or chattels of others; (b) likelihood that the harm that results from it will be great; (c) inability to eliminate the risk by the exercise of reasonable care; (d) extent to which the activity is not a matter of common usage; (e) inappropriateness of the activity to the place where it is carried on; (f) extent to which its value to the community is outweighed by its dangerous attributes.
The rationale behind the doctrine of strict liability for abnormally dangerous activities is distribution of the loss to protect the innocent neighboring landowner. When "one intentionally engages in an ultra hazardous enterprise and thereby exposes others to risks of harm which cannot be eliminated by the exercise of due care, fairness or abstract justice requires the precipitator of the risk to pay for the resulting damages." Chavez v. Southern Pacific Trans. Co., et al., 413 F.Supp. 1203, 1207 (E.D.CA 1976). Accordingly, there is "no basis to require the innocent neighboring land owner to bear the loss," and the entity engaging in the abnormally dangerous activity is liable without the need for a finding of negligence. Id at 1208.

Historically, blasting activities have been grounds for an imposition of strict liability because of the possibility of harm caused by two phenomenon: debris hurled through the air by the explosion itself and vibration or concussion. Prosser, Torts,4th Ed.§ 78; 31 Am. Jur. 2d, Explosions and Explosives §§ 36-37 and 56 ALR 3rd 1017, "Absolute Liability for Blasting Operations as Extending to Injury or Damage not Directly Caused by Debris or Concussion From Explosion." For example, blasting bedrock for road construction or strip mining has traditionally been found to be the classic example of an abnormally dangerous activity because of the inability to control flying rock and/or vibrations or concussions resulting from the blasting. See 31 Am. Jur. 2d, Explosions and Explosives §§ 36-37. As such, the majority of case law applying strict liability to ultra hazardous activity involves the violent disruption of a natural mass and damages resulting from flying rock, vibrations and concussions.

However, the activity of blasting rock is radically different from demolition of a structure by implosion. This is true scientifically, technologically and from the standpoint of the risk of harm associated with the activity.

**Blasting And Implosion**

Blasting and implosion are two very different and distinct concepts and activities. Blasting is the violent disruption of a natural mass through the use of explosives. Blasting is most commonly used in the removal of rock, ledge and strip mining where explosives are the sole source of energy expended. To the contrary, as defined by industry experts, implosion is the breaking of the structural strength of a manmade structure through controlled removal of vertical supports by the use of small explosive charges. These small explosive charges convert the potential energy stored in the structure into kinetic energy and allow for the structure to fall in place. Blasting and implosion clearly involve different science and technologies. Blasting is primarily an engineering discipline while implosion involves structural engineering.

**Implosion Is Not An Ultra Hazardous Activity**

As established above, implosion is drastically different from the traditional ultra hazardous activity of blasting. Application of the six factors enumerated in Section 520 of the Restatement of Torts 2d, see supra, clearly establishes that implosion is not an abnormally dangerous activity and therefore does not justify the imposition of strict liability.

The initial consideration under the Restatement factors is whether the activity entails a high degree of risk of harm to the land of another and the likelihood that harm will result is great.

The Restatement (Second) comment provides, "the harm threatened must be major in degree, and sufficiently serious in its possible consequences to justify holding the defendant strictly responsible." The Restatement (Second) of Torts § 520 cmt. g (1977). Demolition experts opine that implosion eliminates the high degree of risk of harm that is often associated with traditional demolition methods. Demolition by implosion levels very large structures in a matter of seconds, at a prearranged time and leaves manageable debris piles. Furthermore, implosion offers a great degree of control. Therefore, implosion does not entail the high degree of risk of harm necessary to justify strict liability.

The next item for consideration is whether the risk can be eliminated by reasonable care. The comment to the Restatement (Second) of Torts § 520(c) elaborates: "when safety cannot be obtained by the exercise of due care, there is reason to regard the danger as an abnormal one." Id. at §520 cmt. h. However, in light of the scientific developments pertaining to implosion, most risks of serious harm are eliminated through the use of reasonable care. Reasonable care includes contractor and engineer studies of the structure to be demolished, surrounding structures, traffic and seismic conditions to determine if implosion is improper. If implosion is found appropriate, then in light of the studies performed and the reasonable precautions taken, the implosion may be executed safely. Furthermore, rather than using conventional demolition, which would disrupt the community for many months and create a prolonged risk of personal injury and property damage caused by an unanticipated collapse or flying debris, implosion offers the most controllable, expedient and safest means to demolish a building. Finally, implosion’s benefit to the community outweighs any dangerous attributes. Implosion creates minimal disruption of traffic, business and community activity.

It is therefore clear that one who engages in implosion should not be held to the strict liability standard. Rather than penalize a contractor or owner who chooses to utilize this modern method of demolition, implosion should be
recognized for the reasonable alternative it provides.

**Conclusion**

Traditionally a contractor or land owner would bear the burden of strict liability should they choose to employ explosive techniques in the project at hand. As such, the risks of using such techniques ran high, and were seemingly unavoidable. However, advances in demolition gave way to the safer technique of implosion. Demolition by implosion has proven time and again to be a safe and controllable means to demolish a structure. Implosion is clearly not an abnormally dangerous or ultra hazardous activity.

Although the misconception exists that blasting and implosion are one and the same, a close look reveals them to be completely different creatures. Owners and contractors choosing to use the safer means of demolition should not be liable regardless of fault, nor should they automatically assume liability for any and all damage that results. Rather, implosion should be judged under a simple negligence standard, and those utilizing implosion be held responsible for only those damages proximately caused by actions of fault.

Although construction and mining activities involving the use of explosives have been characterized as ultra hazardous and burdened with a strict liability standard, the innovative contractor and engineer should not routinely accept this characterization. Because of advances in engineering and science, many activities that previously presented a great risk of harm can be conducted much more safely. These advances should be brought to the attention of all participants in construction and mining projects, and even environmental projects. Furthermore, it may behoove the contractor and engineer to incorporate into the contract an acknowledgment that the particular activity is not "ultra hazardous." While the parties' agreement may not "bind" the court in later litigation, it certainly will provide persuasive evidence that the court should not apply a strict liability standard.