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ELVIRA R. GONZALEZ ET AL. *v.* O & G
INDUSTRIES, INC., ET AL.
(SC 20422)

Robinson, C. J., and McDonald, D'Auria,
Mullins and Kahn, Js.

Syllabus

The plaintiffs sought to recover damages for personal injuries sustained in an explosion that occurred at a natural gas fueled power plant as a result of the defendants' alleged negligence. Prior to construction of the power plant, the defendant K Co., which received approval to build and operate the power plant, entered into an agreement with the defendant O Co., pursuant to which O Co. agreed to serve as the general contractor for the construction project. K Co. also entered into a contract for management and administrative services with the defendant P Co. Prior to completion of the construction project, and before the power generating equipment could be started, the natural gas fuel supply pipelines had to be cleared of construction debris. O Co. and its subcontractors chose to perform "gas blow" procedures over the course of two days in order to clear the debris. The procedure involves the flow of natural gas through the pipes at a higher pressure than during normal operation, whereby the force of the gas propels the debris through the pipes until it is ejected through a nozzle. On the second day of the gas blow procedures, two procedures were conducted with certain irregularities. Most significantly, and unlike with the prior gas blow procedures, the discharge nozzle was oriented horizontally, rather than vertically. Because of this, by the time the second gas blow procedure began, natural gas remained trapped and mixed with air in a partially enclosed area into which the nozzle discharged the gas. During the second gas blow procedure, the natural gas also flowed through the pipes at an unusually high pressure, and, as a result, heated debris ignited the accumulated natural gas and oxygen, causing the explosion. The plaintiffs, two injured individuals and one of their spouses, alleged that the defendants were strictly liable insofar as they engaged in an ultrahazardous activity that caused the plaintiffs' injuries. The plaintiffs also alleged that their injuries were caused by the defendants' negligence. The plaintiffs' claims were resolved in O Co.'s favor, after which the plaintiffs sought relief only from K Co. and P Co. Following an evidentiary hearing, the trial court rendered judgment for K Co. and P Co. on the plaintiffs' strict liability claims, reasoning that the plaintiffs had failed to satisfy their burden of establishing that the gas blow procedure was abnormally dangerous. Thereafter, K Co. and P Co. filed motions for summary judgment with respect to the plaintiffs' negligence claims, which the trial court granted. In granting those motions, the trial court concluded, *inter alia*, that no reasonable jury could find that K Co. and P Co. exercised sufficient control over O Co.'s performance of the gas blow procedures, and, therefore, they were not vicariously liable for O Co.'s alleged negligence. The plaintiffs thereafter appealed from the trial court's judgment in favor of K Co. and P Co. *Held:*

1. The plaintiffs could not prevail on their claim that the trial court incorrectly concluded that the gas blow procedure was not an abnormally dangerous activity in rendering judgment for K Co. and P Co. on the plaintiffs' strict liability claims, as this court, relying on prior case law and the factors set forth in § 520 of the Restatement (Second) of Torts for determining whether an activity is abnormally dangerous, determined that the gas blow procedure at issue was not abnormally dangerous: even though the harm resulting from a gas blow procedure is likely to be severe, the inherent risk that any harm will occur from conducting the procedure is generally low, and the gas blow procedures in the present case were not a regular and ongoing part of the power plant's operation but were conducted only during a specific phase of the construction process and in a relatively uninhabited area; moreover, although the gas blow procedure, which entails the flow of natural gas at higher than normal pressure in large quantities, is not a procedure

that is used commonly and added little value to the construction of the power plant given the availability of alternative methods to clear the fuel supply pipelines, the risk and severity of potential harm from the procedure would have been materially reduced if the procedures had been performed utilizing certain precautions that are widely known and generally employed in the construction of natural gas fueled power plants, namely, proper orientation and positioning of the discharge nozzle and careful control of the pressure and volume of gas; furthermore, the plaintiffs' reliance on the dangerous nature of natural gas, by itself, was unavailing, as the dangerous nature of an instrumentality must be considered alongside the circumstances and conditions of its use.

2. The plaintiffs could not prevail on their claim that the trial court had improperly granted K Co.'s and P Co.'s motions for summary judgment with respect to the plaintiffs' negligence claims, as that court correctly concluded that K Co. and P Co. did not exercise sufficient control over the performance of O Co. or its subcontractors in conducting the gas blow procedures so as to overcome the general rule that an employer is not vicariously liable for the torts of its independent contractor:
 - a. K Co. and P Co. did not exercise sufficient contractual control over the gas blow procedures to establish the existence of a legal duty, as O Co. had exclusive contractual control over the construction of the power plant and the performance of the gas blow procedures: the agreement between K Co. and O Co. specified that the construction of the power plant was a "turnkey" project, the term "turnkey" was a well-defined type of contract in the construction industry that indicated the parties' intention that O Co. would have full contractual control over the construction of the power plant up to the point of substantial completion, and there was no evidence to indicate that the project had been substantially completed prior to the performance of the gas blow procedures and resulting explosion; moreover, certain other provisions of the agreement between K Co. and O Co. that acknowledged K Co.'s general right to suspend performance of the work and that imposed certain duties on P Co. did not establish that K Co. and P Co. effectively retained control over the construction project, as those provisions could not be construed to create a right of K Co. and P Co. to control the means and methods of O Co.'s performance of its work.
 - b. The plaintiffs could not prevail on their claim that, even in the absence of any contractual control, K Co. and P Co. exercised control over the gas blow procedures by assuming control of or interfering with O Co.'s performance of those procedures: there was no merit to the plaintiffs' claim that H, who was an employee of P Co. representing K Co. on the construction site, exercised control over the gas blow procedures on behalf of K Co. and P Co., as H did no more than exercise K Co.'s contractual right to monitor, inspect, and coordinate the various construction tasks performed by O Co., its subcontractors, and K Co., and supervision of a construction task to ensure that it is ultimately completed according to an employer's requirements does not demonstrate control for purposes of imposing vicarious liability; moreover, contrary to the plaintiffs' claims, K Co. and P Co. did not exercise control over the gas blow procedures on the basis of a conversation that Y, an employee of a company that contracted with K Co. to take responsibility of the power plant once it was constructed, had with B, the supervisor of the gas pipeline safety unit of the Department of Public Utility Control, the failure of K Co. and P Co. to take the precautions that were discussed in that conversation, and the refusal of K Co. and P Co. to follow B's recommendation that O Co. clean the fuel supply pipelines with a non-combustible substance, as Y had no contractual authority regarding the power plant until its completion and had no authority over O Co., and, to the extent that the plaintiffs claimed that Y's actions could be attributable to K Co. and construed as instructing O Co. to reject B's recommendation, such actions would not inform the determination of control given that the Department of Public Utility Control had no jurisdiction over the power plant.
3. This court declined to review the plaintiffs' claims that K Co. and P Co. were vicariously liable for O Co.'s negligence on the ground that O Co. was engaged in an intrinsically dangerous activity and that K Co. and P Co. were directly negligent, as those claims were inadequately briefed; the plaintiffs' analysis of the first claim was minimal and conclusory given the complexity of that claim, and the plaintiffs' treatment of the issue presented by their second claim was conclusory, lacking meaning-

ful analysis of the limited legal authority cited.

Argued January 13—officially released December 30, 2021*

Procedural History

Action to recover damages for, inter alia, personal injuries sustained as a result of the defendants' alleged negligence, brought to the Superior Court in the judicial district of Hartford, and transferred to the Complex Litigation Docket, where the named plaintiff et al. was removed from the case, James McVay was added as a plaintiff, and the plaintiff James L. Thompson II et al. filed a revised complaint; thereafter, the case was tried to the court, *Sheridan, J.*; judgment in part for the defendant Kleen Energy Systems, LLC, et al.; subsequently, the court, *Moukawsher, J.*, granted the motions for summary judgment filed by the defendant Kleen Energy Systems, LLC, et al., and rendered judgment thereon, from which the plaintiff James L. Thompson II et al. appealed. *Affirmed.*

James J. Healy, with whom were *Joel T. Faxon*, *Eric P. Smith*, and *Timothy P. Pothin*, for the appellants (plaintiff James L. Thompson II et al.).

Thomas A. Plotkin, with whom were *John W. Bradley, Jr.*, and, on the brief, *Joseph B. Burns*, for the appellee (defendant Kleen Energy Systems, LLC).

William J. Scully, with whom were *Lorinda S. Coon* and, on the brief, *Jessica M. Scully*, for the appellee (defendant Power Plant Management Services, LLC).

Opinion

McDONALD, J. Almost twelve years ago, an explosion occurred at a natural gas fueled, power generating facility under construction in Middletown. The devastating blast and ensuing fire took the lives of six construction employees and injured nearly thirty more. Several of the victims and their families brought this tort action against the owner of the power plant, the owner's administrative agent, the general contractor, and others. The plaintiffs claimed that the general contractor's oversight during construction caused the tragedy, and that the owner and administrative agent were liable for that oversight under theories of strict liability for abnormally dangerous activities and negligence. After their claims against the general contractor were resolved in the contractor's favor, the plaintiffs sought relief from the defendant owner and administrative agent. The plaintiffs' two theories of tort liability were bifurcated. With respect to the plaintiffs' strict liability claims, the defendants asserted that they were not strictly liable because the procedure that caused the explosion was not abnormally dangerous. Following an evidentiary hearing, the trial court agreed and rendered judgment for the defendants with respect to the strict liability claims. Then, the defendants sought summary judgment with respect to the plaintiffs' negligence claims, asserting that they were not liable in negligence because it was the general contractor, not the owner or administrative agent, which exercised control over the procedure that caused the explosion. The court agreed, granting the defendants' motions for summary judgment with respect to the negligence claims. The plaintiffs appealed, and we must decide whether tort remedies are available to the plaintiffs following this tragic event.

The record reveals the following facts, which the trial court reasonably could have found, and procedural history relevant to our resolution of this appeal. In 2002, the defendant Kleen Energy Systems, LLC, received approval to build and operate a natural gas fueled, electrical power generating facility (power plant) in Middletown. In 2007, Kleen Energy entered into an "Engineering, Procurement and Construction Agreement" with the named defendant, O & G Industries, Inc., under which O & G agreed to serve as the general contractor for the construction of the power plant. Kleen Energy also entered into a "Contract for Project Management and Administrative Services," which was subsequently amended and restated, with the defendant Power Plant Management Services, LLC (PPMS). Because Kleen Energy had no employees of its own, it hired PPMS "to provide management, administrative and other support services required to manage and administer the [power plant] and [Kleen Energy's] business on a day to day basis, and to perform certain other tasks and duties relating to the [power plant] and [Kleen Energy's] busi-

ness”¹

By early 2010, the construction of the power plant was nearing completion. At this point, before the power generating equipment could start up, the manufacturer of the gas turbines required that the natural gas fuel supply pipelines be cleared of construction debris. This was required because foreign material, such as welding slag, rust, and dirt, which is often introduced into the piping during the earlier phases of construction, could damage the gas turbines.

To clear this debris from the natural gas fuel supply pipelines, O & G and its subcontractors performed a procedure commonly referred to as a “gas blow.”² In connection with this procedure, natural gas flows through the piping at a higher pressure than during normal operation, and the force of the gas then propels the debris through the pipe until it is ejected through an open-ended pipe called a “nozzle.” The gas blow procedure has been a common practice in the construction of power plants since before World War II. Although there are other procedures that can be used to clear construction debris from natural gas fuel supply pipelines, it has been estimated that gas blows have been employed in the construction of 60 to 70 percent of the natural gas fueled power plants that have been constructed in the last twenty-five years.

For Kleen Energy’s power plant, about 2000 feet of natural gas fuel supply pipeline needed to be cleared over two days. The pipelines were cleared in segments corresponding with discharge nozzles located in eight places throughout the length of the piping. On January 30, 2010, O & G and several subcontractors conducted the first series of gas blow procedures, which cleared approximately three-quarters of the piping without incident. Early in the morning, on February 7, 2010, several gas blow procedures were conducted, again without incident. For all these gas blow procedures, the discharge nozzles had been oriented vertically, so that the natural gas vented upward into the atmosphere without obstruction.

Later that morning, two gas blow procedures were conducted with certain irregularities. Most significantly, and unlike with the prior gas blow procedures, the discharge nozzle was oriented horizontally during these gas blow procedures. As a result, when these gas blow procedures began, the natural gas discharged from the nozzle across a courtyard into an area partially enclosed between two large structures and surrounded by other power generation equipment, including propane heaters. In addition, four small metal pipes were located in the path of the exhaust from the discharge nozzle.

The first gas blow lasted for two minutes, the longest one that morning. The natural gas used for this gas

blow traveled out of the discharge nozzle and into the partially enclosed area, where it was trapped, unable to dissipate quickly. In addition, the weather conditions at the time—the temperature outside was approximately 26 degrees Fahrenheit—likely further slowed the dissipation of the natural gas. As a result, by the time the second gas blow began, approximately five minutes after the conclusion of the first gas blow, natural gas remained trapped and mixed with air in the partially enclosed area into which the nozzle discharged.

The second gas blow lasted for approximately forty-five seconds. The natural gas flowed through the piping at an unusually high pressure—five times the pressure recommended for the procedure by the gas turbine manufacturer. Given this high pressure, the solid debris was expelled from the discharge nozzle at a high velocity. After the debris was expelled from the discharge nozzle, it struck the small metal pipes located in the courtyard, acquiring heat from the glancing blow. The heated debris was then carried by the discharge exhaust into the partially enclosed area, where natural gas had been trapped from the prior gas blow. The heated debris ignited the accumulated natural gas and oxygen. As a result, an explosion occurred, killing six employees and injuring twenty-seven others.

In 2013, the plaintiffs—two employees who were on the construction site engaged in work unrelated to the gas blow procedure when they were injured by the explosion, and one of their spouses³—filed the operative complaint in the present action against the defendants Kleen Energy and PPMS, as well as O & G.⁴ Specifically, the plaintiffs alleged that (1) the defendants were strictly liable because the injuries of the plaintiff employees were caused by the defendants’ engaging in an “ultrahazardous activity,” and (2) those injuries were caused by the defendants’ negligence related to the gas blow procedure. The trial court subsequently granted O & G’s motions for summary judgment and rendered judgment thereon in its favor. See *Gonzalez v. O & G Industries, Inc.*, 322 Conn. 291, 300, 140 A.3d 950 (2016). On appeal, we affirmed the trial court’s judgment, concluding that O & G was entitled to immunity as a “principal employer” under General Statutes § 31-291 because it had paid workers’ compensation benefits to the two plaintiff employees. *Id.*, 293–95, 319.

In 2015, following an evidentiary hearing, the trial court rendered judgment for the remaining defendants regarding the plaintiffs’ strict liability claims. After considering our decision in *Caporale v. C. W. Blakeslee & Sons, Inc.*, 149 Conn. 79, 85, 175 A.2d 561 (1961), as well as the six factor test set forth in § 520 of the Restatement (Second) of Torts, the trial court reasoned that the plaintiffs failed to satisfy their burden of establishing that the gas blow procedure was “abnormally danger-

ous.” Thus, the trial court concluded, the gas blow procedure did not support a claim of strict liability.

In 2019, the defendants moved for summary judgment with respect to the plaintiffs’ negligence claims. The defendants contended that no reasonable jury could find that they exercised sufficient control over the gas blow procedure to support the existence of a duty of care owed to the plaintiffs, and, as a result, they were not vicariously liable for O & G’s negligence during the gas blow procedure. The trial court agreed and granted the defendants’ separately filed motions, reasoning that Kleen Energy ceded total control over the project to O & G in the contract between them. The court further reasoned that no reasonable jury could conclude that the defendants exercised control over O & G’s performance of the gas blow procedure. The plaintiffs appealed to the Appellate Court from the trial court’s judgment on the strict liability claims and its granting of the defendants’ motions for summary judgment on the negligence claims, and the appeal was transferred to this court.

The plaintiffs raise three issues on appeal. First, the plaintiffs contend that the trial court improperly rendered judgment in favor of the defendants on the plaintiffs’ strict liability claims. Specifically, the plaintiffs claim that the gas blow procedure is an abnormally dangerous activity and that, as a result, strict liability should apply pursuant to *Caporale* and § 520 of the Restatement (Second). The defendants disagree and contend that the court correctly concluded that the gas blow procedure is not abnormally dangerous.

Second, the plaintiffs contend that the trial court improperly granted the defendants’ motions for summary judgment with respect to the plaintiffs’ negligence claims. Specifically, the plaintiffs claim that the record supports a claim of negligence under a theory of vicarious liability because a reasonable jury could find that the defendants exercised control over the gas blow procedure. The defendants disagree, contending that the court correctly concluded that no reasonable jury could find that they exercised control over the gas blow procedure.

Third, the plaintiffs raise two additional arguments to support their contention that the trial court improperly granted the defendants’ motions for summary judgment with respect to the plaintiffs’ negligence claims. Specifically, the plaintiffs assert that their negligence claims survive under a theory of vicarious liability, regardless of the control issue, because an employer is liable for the torts that result from its independent contractor’s engaging in an “inherently dangerous” activity. In addition, the plaintiffs assert that their negligence claims survive under a theory that the defendants were directly negligent. The defendants disagree. Kleen Energy contends that Connecticut law does not recognize the

“inherently dangerous” exception to the general rule that an employer is not vicariously liable for the torts of its independent contractor. The defendants assert that the record does not support a claim of direct negligence.

We agree with the defendants with respect to the first issue and conclude that the gas blow procedure is not an abnormally dangerous activity and that the plaintiffs cannot maintain a strict liability claim. We also agree with the defendants with respect to the second issue and conclude that no reasonable jury could find that the defendants exercised control over the gas blow procedure. Finally, we decline to review the plaintiffs’ two additional negligence arguments because we conclude that those arguments are inadequately briefed.

I

We first consider the plaintiffs’ contention that the trial court improperly rendered judgment with respect to the strict liability claims by concluding that the gas blow procedure was not an abnormally dangerous activity. The plaintiffs assert that the gas blow procedure is analogous to activities that Connecticut courts have previously held to be abnormally dangerous, namely, conducting research with explosive chemicals, blasting, and pile driving. In addition, the plaintiffs assert that all six factors in § 520 of the Restatement (Second) support their contention that the gas blow procedure is abnormally dangerous. See 3 Restatement (Second), Torts § 520, p. 36 (1977). The defendants disagree, asserting that the court correctly concluded that the totality of the six factors established that the gas blow procedure was not abnormally dangerous.

We begin by setting forth the standard applicable to our review of the trial court’s judgment with respect to the plaintiffs’ strict liability claims. “[T]he scope of our appellate review depends [on] the proper characterization of the rulings made by the trial court. To the extent that the trial court has made findings of fact, our review is limited to deciding whether such findings were clearly erroneous. When, however, the trial court draws conclusions of law, our review is plenary and we must decide whether its conclusions are legally and logically correct and find support in the facts that appear in the record.” (Internal quotation marks omitted.) *FirstLight Hydro Generating Co. v. Stewart*, 328 Conn. 668, 677–78, 182 A.3d 67 (2018).

The plaintiffs’ strict liability claim turns on whether the gas blow procedure is abnormally dangerous. “The issue of whether an activity is abnormally dangerous . . . is a question of law”; accordingly, our review of this issue is plenary. *Green v. Ensign-Bickford Co.*, 25 Conn. App. 479, 485, 595 A.2d 1383, cert. denied, 220 Conn. 919, 597 A.2d 341 (1991); see, e.g., 3 Restatement

(Second), supra, § 520, comment (l), pp. 42–43 (“[w]hether the activity is an abnormally dangerous one is to be determined by the court . . . [because] [t]he imposition of strict liability . . . involves a characterization of the defendant’s activity or enterprise itself, and a decision as to whether he is free to conduct it at all without becoming subject to liability for the harm that ensues even though he has used all reasonable care”). However, the trial court’s judgment involved the resolution of disputed issues of fact because, as the court correctly noted, the determination of whether the gas blow procedure was abnormally dangerous was particularly fact intensive in this case. Accordingly, to the extent that such a determination relies on the court’s findings of fact with respect to the gas blow procedure, our review of those factual findings “is limited to deciding whether such findings were clearly erroneous.” (Internal quotation marks omitted.) *FirstLight Hydro Generating Co. v. Stewart*, supra, 328 Conn. 678.

In Connecticut, strict liability is imposed on a defendant who engages in an intrinsically dangerous, ultrahazardous, or abnormally dangerous activity.⁵ “Under this doctrine, a plaintiff is not required to show that his loss was caused by the defendant’s negligence. It is sufficient to show only that the defendant engaged in an ultrahazardous activity that caused the [plaintiff’s] loss.” *Green v. Ensign-Bickford Co.*, supra, 25 Conn. App. 482; see, e.g., *Whitman Hotel Corp. v. Elliott & Watrous Engineering Co.*, 137 Conn. 562, 566, 79 A.2d 591 (1951) (strict liability “does not make the failure to use reasonable care a condition of liability”).

This court has had only two occasions to articulate these principles and to consider whether a particular activity is abnormally dangerous so as to support the imposition of strict liability, both of which predate the Restatement (Second). In *Whitman Hotel Corp.*, the defendant contractor and the defendant subcontractor employed blasts of dynamite to enlarge a river, and the concussive force of the explosions caused damage to the plaintiffs’ nearby building. *Whitman Hotel Corp. v. Elliott & Watrous Engineering Co.*, supra, 137 Conn. 563–64. We held that the defendants were strictly liable, noting that exploding dynamite was a prototypical example of an “intrinsically dangerous” activity. *Id.*, 565, 572–73. This was our first articulation of the rule for strict liability: “A person who uses an intrinsically dangerous means to accomplish a lawful end, in such a way as will necessarily or obviously expose the person of another to the danger of probable injury, is liable if such injury results, even though he uses all proper care.” *Id.*, 565. We also noted that the imposition of strict liability represents a judicial policy determination, informed by the circumstances of the activity. See *id.*, 566–67. Under the doctrine of strict liability, the defendant “is not regarded as engaging in blameworthy conduct. . . . But common notions of fairness require that the defen-

dant make good any harm that results even though his conduct is free from fault.” (Internal quotation marks omitted.) *Id.*, 567; see, e.g., 3 Restatement (Second), *supra*, § 519, comment (d), p. 35 (“[Strict liability] is founded [on] a policy of the law that imposes [on] anyone who for his own purposes creates an abnormal risk of harm to his neighbors, the responsibility of relieving against that harm when it does in fact occur. The defendant’s enterprise, in other words, is required to pay its way by compensating for the harm it causes, because of its special, abnormal and dangerous character.”).

We next considered the doctrine of strict liability for an abnormally dangerous activity in *Caporale*. In that case, the defendant subcontractor was engaged in pile driving operations for the construction of a highway, and the resulting vibrations damaged the plaintiffs’ nearby cement buildings. *Caporale v. C. W. Blakelee & Sons, Inc.*, *supra*, 149 Conn. 80. We held that the defendant was strictly liable because the particular circumstances and conditions of the pile driving operations involved a risk of probable injury, “even when due care was used,” and because the risk was “actually anticipated” by the defendant before it commenced work. *Id.*, 85–86. We refined the rule from *Whitman Hotel Corp.*: “To impose liability without fault, certain factors must be present: an instrumentality capable of producing harm; circumstances and conditions in its use which, irrespective of a lawful purpose or due care, involve a risk of probable injury to such a degree that the activity fairly can be said to be intrinsically dangerous to the person or property of others; and a causal relation between the activity and the injury for which damages are claimed. The defendant actor, even when [using] due care, takes a calculated risk which [the defendant], and not the innocent injured party, should bear.” *Id.*, 85.

Since we last addressed the issue of strict liability for abnormally dangerous activities in *Caporale* sixty years ago, other Connecticut courts, including the trial court in this case, have applied the rule for strict liability and abnormally dangerous activities articulated in §§ 519 and 520 of the Restatement (Second) of Torts. Section 519 (1) 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.”⁶ 3 Restatement (Second), *supra*, § 519 (1), p. 34. Section 520 lists six factors for the court to consider when determining whether an activity is abnormally dangerous: “(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”; and “(f) extent to which its value to the community is outweighed by its dangerous attributes.” *Id.*, § 520, p. 36.

Comment (f) to § 520 of the Restatement (Second) elaborates on the nature of an abnormally dangerous activity in light of these factors: “In general, abnormal dangers arise from activities that are in themselves unusual, or from unusual risks created by more usual activities under particular circumstances. In determining whether the danger is abnormal, the factors listed in [c]lauses (a) to (f) of this [s]ection are all to be considered, and are all of importance. Any one of them is not necessarily sufficient of itself in a particular case, and ordinarily several of them will be required for strict liability. On the other hand, it is not necessary that each of them be present, especially if others weigh heavily. . . . The essential question is whether the risk created is so unusual, either because of its magnitude or because of the circumstances surrounding it, as to justify the imposition of strict liability for the harm that results from it, even though it is carried on with all reasonable care. In other words, are its dangers and inappropriateness for the locality so great that, despite any usefulness it may have for the community, it should be required as a matter of law to pay for any harm it causes, without the need of a finding of negligence.” *Id.*, § 520, comment (f), pp. 37–38.

Although *Whitman Hotel Corp.* and *Caporale* are the only two cases from this court to consider the doctrine of strict liability for an abnormally dangerous activity, the Appellate Court has applied the rule from those cases, along with the rule articulated in the Restatement (Second), more recently. In *Green*, three chemists employed by the defendant, a manufacturer of explosives, were researching volatile chemicals for the development of a new product when an explosion occurred. See *Green v. Ensign-Bickford Co.*, *supra*, 25 Conn. App. 480–81. The explosion injured the plaintiff, who was located in his house nearly one mile away from the accident at the time. *Id.*, 481. The court applied *Whitman Hotel Corp.*, *Caporale*, and the six factors in § 520 of the Restatement (Second); see *id.*, 483, 486–87; and concluded that “the defendant’s experiment with a highly explosive chemical created an unavoidable risk of damage” *Id.*, 483. Specifically, the court noted that at least five of the six factors were satisfied: the use of highly volatile chemicals involved a great degree of risk and severe resulting harm, such risk was inherent to the research and experimentation with the chemicals, the activity was not a matter of common usage, and the activity was inappropriate for the surrounding residential area. See *id.*, 486–87. Accordingly, the court held that the chemical experimentation was abnormally dangerous and that the defendant was strictly liable. See *id.*, 487.

Numerous Connecticut trial courts also have considered the rule for strict liability and abnormally dangerous activities articulated in *Whitman Hotel Corp.*, *Caporale*, and the Restatement (Second). See, e.g., *Ramsay v. Och-Ziff Capital Management Group, LLC*, Superior Court, judicial district of New Haven, Docket No. CV-10-6007285-S (September 8, 2010) (50 Conn. L. Rptr. 537). These courts have recognized that “Connecticut’s appellate courts have applied the doctrine of strict liability for engaging in ultrahazardous or abnormally dangerous activities sparingly.” *Id.*, 538; see, e.g., *Levenstein v. Yale University*, 40 Conn. Supp. 123, 126, 482 A.2d 724 (1984) (“The courts in Connecticut and other jurisdictions [that] recognize the doctrine of strict liability for dangerous activities, impose it only in narrow circumstances. Typically, it has been found applicable when an activity, not regularly engaged in by the general public, is conducted in or near a heavily populated area, such that it necessarily subjects vast numbers of persons to potentially serious injury in the event of a mishap.”).

We have not expressly adopted §§ 519 and 520 of the Restatement (Second) for the rule of strict liability for abnormally dangerous activities. Neither party, however, disputes that these sections govern the resolution of this issue. In addition, these provisions of the Restatement (Second) have been adopted by a growing majority of jurisdictions in the United States. See, e.g., *Arlington Forest Associates v. Exxon Corp.*, 774 F. Supp. 387, 389 (E.D. Va. 1991); see also, e.g., *id.*, 389 n.3 (citing cases). Most important, the Restatement (Second) factors and comments are consistent with the principles this court articulated in *Whitman Hotel Corp.* and *Caporale*, which have long governed the imposition of strict liability for abnormally dangerous activities in Connecticut. See, e.g., *Ramsay v. Och-Ziff Capital Management Group, LLC*, *supra*, 50 Conn. L. Rptr. 538 (“[t]he Restatement [Second] is consistent with Connecticut’s [long-standing] law which focuses on the nature of the specific operation or activity involving a dangerous instrumentality, material or substance”). Accordingly, we evaluate the plaintiffs’ claim that the gas blow procedure is abnormally dangerous pursuant to the principles articulated in *Whitman Hotel Corp.* and *Caporale*, alongside the six factors in § 520 of the Restatement (Second).⁷

We begin with the first and second factors in § 520 of the Restatement (Second). These factors consider the “existence of a high degree of risk of some harm to the person, land or chattels of others” and the “likelihood that the harm that results from it will be great” 3 Restatement (Second), *supra*, § 520 (a) and (b), p. 36. In other words, these factors concern the potential frequency and severity of harm resulting from the activity. Although all six factors must be weighed

in relation to the others, these first two factors exist in a particularly close orbit. “It is not enough that there is a recognizable risk of some relatively slight harm If the potential harm is sufficiently great, however, as in the case of a nuclear explosion, the likelihood that it will take place may be comparatively slight and yet the activity be regarded as abnormally dangerous.” *Id.*, § 520, comment (g), p. 38. Moreover, these two factors concern danger that is either actually anticipated or foreseeable. See, e.g., *Caporale v. C. W. Blakeslee Sons, Inc.*, supra, 149 Conn. 86 (noting that risk was “actually anticipated by the defendant”); *Whitman Hotel Corp. v. Elliott & Watrous Engineering Co.*, supra, 137 Conn. 567 (strict liability relates to “danger [that] may be foreseen by reasonable [people], as possible if not probable” (internal quotation marks omitted)); 1 Restatement (Third), Torts, Liability for Physical and Emotional Harm § 20 (b) (1), p. 229 (2010) (requiring risk to be “foreseeable”); 3 Restatement (Second), supra, § 519 (2), p. 34 (requiring “the kind of harm, the possibility of which makes the activity abnormally dangerous”).

We agree with the defendants that the first factor, regarding the inherent risk of some harm, weighs in their favor. According to the trial court’s findings, approximately 60 to 70 percent of the natural gas fueled, electrical power plants constructed in the United States in the last twenty-five years have employed gas blow procedures to clear the fuel supply pipelines. Given that there are more than 700 gas fueled power plants in the United States, and that dozens of gas blows are often needed to clear the total length of piping for each power plant, the trial court reasonably inferred that “thousands of separate gas blows have been conducted over the years.” Against this history, only two instances of combustions had occurred during a gas blow procedure prior to the Kleen Energy explosion. Similar to the present case, in 2001, a gas blow was performed during the construction of a power generation station in Ohio, and the natural gas ignited when materials emitted from the discharge nozzle struck an obstruction. In 2003, a gas blow was performed during the construction of a power plant in California, and the natural gas ignited because the discharge nozzle was not properly grounded, resulting in the buildup of static electricity within the pipe. As the trial court noted, in both cases “deviations from generally accepted procedures for safely conducting a gas blow led to” the combustions. Accordingly, given the rare instances of combustion relative to the frequency with which the gas blow procedures have been employed, the inherent risk that some harm will occur is low.

The second factor, regarding the severity of the resulting harm, requires a more nuanced analysis. In general, when any harm occurs during a gas blow procedure, that harm is likely to be severe. Natural gas will burn

rather than explode at relatively low pressures and quantities, which is why it is used in residential settings for cooking food and heating water. The gas blow procedure at issue in this case, however, necessarily involves pressures and quantities of natural gas that are so high that, if any harm occurs, it is likely to occur in the form of an explosion or a massive combustion. As the trial court noted, when natural gas ignites during a gas blow procedure, “[a]n intense, high temperature explosion results, producing a blast wave that can have dramatic effects in terms of damage to property and injury to persons.” In this case, an individual located approximately 1500 feet from the power plant testified that the force of the explosion shook the building he was in, dislodged hanging light fixtures, knocked small items off shelves, and knocked picture frames off the walls. This is analogous to the plaintiff in *Green*, who was “lifted . . . upward from his bed and [thrown] . . . across the room” following an explosion nearly one mile away. *Green v. Ensign-Bickford Co.*, supra, 25 Conn. App. 481. At first glance, the inherent severity of any resulting harm appears to weigh in favor of the plaintiffs.

The plaintiffs also contend that the second factor weighs heavily in their favor because the rule regarding abnormally dangerous activities expressly contemplates a situation when the risk of harm may be relatively low, yet the severity of the resulting harm tips the balance in favor of imposing strict liability. Specifically, the plaintiffs point to comment (g) to § 520 of the Restatement (Second), which provides in relevant part: “If the potential harm is sufficiently great, however . . . the likelihood that it will take place may be comparatively slight and yet the activity be regarded as abnormally dangerous. . . .” 3 Restatement (Second), supra, § 520, comment (g), p. 38.

Similarly, the plaintiffs point to *McLane v. Northwest Natural Gas Co.*, 255 Or. 324, 327–28, 467 P.2d 635 (1970), for the proposition that the inherent volatility of natural gas renders its use abnormally dangerous. In that case, natural gas escaped from a storage unit on the defendant’s property, causing an explosion that killed the decedent. *Id.*, 326–27. Applying state common law, as well as the six factor test from § 520 of the Restatement (Second), the Supreme Court of Oregon concluded that the storage of large amounts of natural gas was an abnormally dangerous activity that supported the imposition of strict liability. See *id.*, 328–29, 331. The court “view[ed] natural gas as of the same nature as an explosive” because natural gas is “sufficiently volatile to be capable of great harm and [because] . . . the danger of explosion and/or fire from its storage in large quantities cannot be completely eliminated by the use of reasonable care.” *Id.*, 328. The court acknowledged that the risk of an explosion or a fire is low when care is used and agreed “that miscarriage

is not frequent”; however, the court reasoned, “when miscarriage does occur, it can be lethal.” *Id.*, 329; see, e.g., *Siegler v. Kuhlman*, 81 Wn. 2d 448, 454, 502 P.2d 1181 (1972) (“[g]asoline is always dangerous whether kept in large or small quantities because of its volatility, inflammability and explosiveness”), cert. denied, 411 U.S. 983, 93 S. Ct. 2275, 36 L. Ed. 2d 959 (1973). The plaintiffs contend that *McLane* supports their claim that the gas blow procedure involves such severe resulting harm that it is an abnormally dangerous activity.

Comment (g) to § 520 of the Restatement (Second), however, instructs courts to consider the risk and severity of harm in close relation to the fifth factor, which concerns the “inappropriateness of the activity to the place where it is carried on”; 3 Restatement (Second), supra, § 520 (e), p. 36; because “[s]ome activities . . . necessarily involve major risks unless they are conducted in a remote place or to a very limited extent.” *Id.*, § 520, comment (g), p. 38. Similarly, the court in *McLane* expressly agreed with the Restatement (Second) that the “character of the locality” is material to the imposition of strict liability, overruling its prior ruling to the contrary. *McLane v. Northwest Natural Gas Co.*, supra, 255 Or. 328–29.

Turning to this factor, the trial court in the present case found that the power plant was constructed in a rural area zoned for industrial use. The property was bordered by the Connecticut River on one side and surrounded by mostly vacant, wooded land for approximately one-half mile on the other three sides. Within this radius was a cluster of fewer than ten homes and another electrical generating station. Within a one mile radius of the power plant was the Connecticut Valley Hospital and approximately seventy dwellings. In light of these factual findings, the court concluded that the “relatively uninhabited and rural surroundings” were an appropriate location for the construction of the power plant and the associated gas blow procedure.

The plaintiffs assert that, contrary to the trial court’s factual findings, the one mile radius surrounding the power plant contained at least 214 dwellings and almost 3000 people, rendering it “[p]redominantly residential,” “mixed-use,” and inappropriate for the gas blow procedure. (Internal quotation marks omitted.) On the basis of this record, however, we cannot conclude that the industrial and rural location was wholly inappropriate for the power plant or the attendant gas blow procedure. Moreover, these facts are distinguishable from the facts in *Green*, in which the Appellate Court relied on the fact that the chemical experimentation occurred “in a residential area.” *Green v. Ensign-Bickford Co.*, supra, 25 Conn. App. 487. As the trial court here noted, the fact that the gas blow procedure was conducted in a rural and industrial area “significantly diminish[ed] the ‘degree of risk’ to a point where the likelihood of

serious harm to large numbers of persons or widespread damage to property [was] not present.” In addition, unlike the chemical experimentation in *Green v. Ensign-Bickford Co.*, supra, 480, gas blow procedures are not a regular or ongoing part of the power plant’s operation; rather, they are conducted “to a very limited extent”; 3 Restatement (Second), supra, § 520, comment (g), p. 38; only during a specific phase of the construction process.

Considered together, although the second factor, regarding the inherent severity of the resulting harm, weighs in favor of imposing strict liability, this factor must be informed by the first factor, regarding the fairly low risk that any harm will occur, as well as the fifth factor, regarding the appropriateness of the location. We conclude that the totality of these three factors weighs in favor of the defendants’ argument that the gas blow procedure is not abnormally dangerous.

We next consider the fourth and sixth factors, both of which weigh in favor of the plaintiffs’ claim. The fourth factor concerns the “extent to which the activity is not a matter of common usage” Id., § 520 (d), p. 36. Comment (i) to § 520 of the Restatement (Second) explains that “[a]n activity is a matter of common usage if it is customarily carried on by the great mass of mankind or by many people in the community.” Id., § 520, comment (i), p. 39. The comment further explains that, although blasting or using explosives may be employed regularly for excavation or construction, these activities are “not carried on by any large percentage of the population, and therefore [they are] not a matter of common usage.” Id., p. 40. As the trial court correctly noted, the general public does not typically use natural gas at such high pressures, in such large quantities, or for such an industrial purpose as the gas blow procedure entails. Accordingly, this factor clearly weighs in favor of the plaintiffs’ assertion that the gas blow procedure is abnormally dangerous.

The sixth factor concerns the “extent to which [the activity’s] value to the community is outweighed by its dangerous attributes.” Id., § 520 (f), p. 36. As the trial court correctly noted, “the activity to be valued is not the construction of the [power plant], but the gas blow procedure conducted during the construction of the [power plant].” Although the natural gas fuel supply pipelines needed to be cleared as part of the construction of the power plant, the gas blow procedure provided relatively little value given that it was only one of several methods available to clear the piping. For example, Karl Baker, the supervisor of the gas pipeline safety unit within the Department of Public Utility Control,⁸ reported and subsequently testified that the power plants within the department’s jurisdiction typically use inert substances with no potential to combust, such as nitrogen, compressed air, or water, to clear fuel supply

pipelines.⁹ We agree with the trial court's conclusion that the gas blow procedure added little value to the construction of the power plant given the availability of alternative methods to clear the fuel supply pipelines, and that any such value did not outweigh the small but severe risk of harm inherent to the procedure. This factor weighs in favor of the plaintiffs' assertion that the gas blow procedure is abnormally dangerous.

The third factor, however, carries particular significance in the six factor balancing test, and it weighs heavily in favor of the defendants' assertion that the gas blow procedure is not abnormally dangerous. This factor concerns the "inability to eliminate the risk by the exercise of reasonable care" 3 Restatement (Second), *supra*, § 520 (c), p. 36. Comment (h) to § 520 of the Restatement (Second) explains: "It is not necessary . . . that the risk be one that no conceivable precautions or care could eliminate. What is referred to here is the *unavoidable risk remaining in the activity, even though the actor has taken all reasonable precautions in advance and has exercised all reasonable care in his operation, so that [the actor] is not negligent.*" (Emphasis added.) *Id.*, § 520, comment (h), p. 39; see, e.g., *Arlington Forest Associates v. Exxon Corp.*, *supra*, 774 F. Supp. 390 ("Absolute safety is not required [under § 520 of the Restatement (Second)]. Rather, the risk must be reducible by due care to a point where the likelihood of harm is no longer high."); *New Meadows Holding Co. v. Washington Water Power Co.*, 102 Wn. 2d 495, 501, 687 P.2d 212 (1984) (third factor "addresses itself to the question of whether, through the exercise of ordinary care, the risk inherent in an activity can be reduced to the point where it can no longer be characterized as a 'high degree of risk'"). In other words, this factor requires the court to consider: After reasonable care and precautions are employed, is there some lingering, unavoidable feature of the activity—perhaps a high risk of harm, an inherent severity of any resulting harm, or a dangerous character of the instrumentality—that justifies the imposition of strict liability?

Although all six factors in § 520 of the Restatement (Second) are important to the determination of whether an activity is abnormally dangerous, the third factor is particularly significant because it captures the key difference between strict liability and ordinary negligence. A negligence claim succeeds if, among other things, the actor failed to exercise reasonable care. The distinguishing feature of a strict liability claim is that the actor is liable *regardless* of whether the actor exercised reasonable care. Accordingly, when determining whether a claim is well suited to the strict liability framework, it is crucial to inquire whether the exercise of reasonable care would have materially reduced the risk of harm, the severity of any resulting harm, or the otherwise dangerous attributes of the activity or instrumen-

tality. If so, then the claim is better suited to the negligence framework so that liability hinges on whether the actor actually employed reasonable care. If not, then the claim is better suited to the strict liability framework because “there is reason to regard the danger as an abnormal one” when “safety cannot be attained by the exercise of due care” 3 Restatement (Second), *supra*, § 520, comment (h), p. 38; see, e.g., *Caporale v. C. W. Blakeslee & Sons, Inc.*, *supra*, 149 Conn. 84 (explaining that dangerous instrumentality and circumstances “create, in combination, an intrinsically dangerous operation or activity . . . [and] [i]n bringing them together, albeit for a lawful purpose and with due care, one acts at his peril”); *Whitman Hotel Corp. v. Elliott & Watrous Engineering Co.*, *supra*, 137 Conn. 566 (explaining that “the failure to use reasonable care” is not “a condition of liability”).

Our emphasis of this factor is consistent with other courts’ application of the six factor balancing test. See, e.g., *Arlington Forest Associates v. Exxon Corp.*, *supra*, 774 F. Supp. 390 (“Central to the determination of whether an activity is abnormally dangerous is whether it could be made safe through the exercise of reasonable care. . . . If an activity can be performed safely with ordinary care, negligence serves both as an adequate remedy for injury and a sufficient deterrent to carelessness. Strict liability is reserved for selected uncommon and extraordinarily dangerous activities for which negligence is an inadequate deterrent or remedy.” (Citations omitted; footnote omitted.)); *Philip Morris, Inc. v. Emerson*, 235 Va. 380, 406, 368 S.E.2d 268 (1988) (strict liability was inappropriate when defendants “had the ability to eliminate the risk of injury by exercising reasonable care”); see also, e.g., *Liss v. Milford Partners, Inc.*, Superior Court, judicial district of Hartford, Complex Litigation Docket, Docket No. X07-CV-04-4025123-S (September 29, 2008) (46 Conn. L. Rptr. 439, 442) (“the exercise of due care would have perhaps prevented any [harm]; an intrinsically dangerous activity would have . . . resulted in such [harm] notwithstanding the exercise of due care”).

Here, the trial court found that, “if certain well-known precautions are taken, it is very unlikely that natural gas combustion or explosion will occur during a gas blow procedure.” Specifically, the court found that two precautions, either together or independently, would have significantly reduced the likelihood of ignition or combustion of the natural gas during the gas blow procedure, namely, properly orienting the discharge nozzle and carefully controlling the pressure and volume of natural gas employed during the procedure. The court found that these precautions were widely known and generally employed in the construction of natural gas fueled power plants prior to the Kleen Energy explosion.

First, properly orienting and positioning the discharge nozzle would have significantly and materially reduced the risk of harm. The trial court found that “[t]he discharge pipe should be oriented vertically, it should terminate outdoors, in an open, well ventilated area, at least ten feet above any nearby structure, it should discharge into an area that is free from any obstructions, it should discharge [into] an area that is free from any sources of sparks (such as electrical equipment), and it should be grounded to prevent the buildup of any static electricity.” In the three instances in which explosions or combustions have resulted from a gas blow procedure, some combination of these precautions was not taken. In the 2001 incident in Ohio, the area into which the natural gas was discharged contained an obstruction. In the 2003 incident in California, the discharge nozzle was not properly grounded, allowing static electricity to accumulate. In the present case, although the discharge nozzle was properly grounded, it was improperly positioned horizontally so that the natural gas discharged into a partially enclosed area containing numerous obstructions, including metal pipes, electrical equipment, and large nearby structures. Indeed, this was distinguishable from the gas blow procedures previously employed at the power plant, which had occurred without incident.

Second, carefully controlling the pressure and volume of natural gas employed during the procedure would have minimized the velocity of the discharged debris and the amount of dispersed natural gas, which, in turn, would have materially reduced the risk of harm, the severity of any resulting harm, and the generally dangerous attributes of the natural gas. The trial court found that the manufacturer of the gas turbines typically specifies the pressure of natural gas required to conduct the gas blow procedure to ensure that no debris would remain in the piping. Such pressure is measured by the “cleaning force ratio,” which is a comparison to normal operational pressure. In this case, the manufacturer of the gas turbines recommended a cleaning force ratio of 2.0, meaning that the force of the natural gas used to expel the debris from the piping should be twice the force that would be generated by the natural gas flowing through the piping under normal operating conditions. The court also found that “[t]he manufacturer’s recommended . . . ‘cleaning force ratio’ should not be exceeded. An unnecessarily high [cleaning force ratio] increases the velocity of the debris in the gas discharge and increases the likelihood that the discharged debris will, as a result of friction, generate and retain sufficient thermal energy to initiate combustion within the cloud of dispersing gas.”

It was calculated that the cleaning force ratio at the discharge nozzle during the gas blow procedure that caused the explosion was 10.0. This means that the

natural gas flowed through the piping at ten times the force that it would flow through the piping during normal operation, which was five times higher than the manufacturer's recommendation for the gas blow procedure. Because of this unusually high pressure of natural gas, the solid debris was propelled from the discharge nozzle at a correspondingly high velocity, approximately 1400 feet per second. In turn, this unusually high velocity increased the likelihood that the debris would acquire enough thermal energy to ignite the natural gas, which was what caused the explosion in this case. Accordingly, the trial court found that limiting the pressure of natural gas to correspond with the cleaning force ratio would have better controlled the velocity of the discharged debris and reduced the likelihood of combustion.

In addition, the trial court noted that the volume of natural gas can be minimized further by carefully choosing between two variations of the gas blow procedure. The variation of the procedure employed in this case was a "continuous" blow, meaning that the discharge nozzle remained completely open to allow the natural gas to flow freely through it. Another variation of the procedure, known as a "puff blow," involves pressurizing the length of pipe with natural gas while the discharge nozzle is closed, then closing the valve supplying the natural gas, and then opening the discharge nozzle quickly, allowing the gas to vent from the discharge nozzle in a short burst. This variation requires less natural gas per blow and, accordingly, requires less time and space for the discharged natural gas to disperse to a safe concentration. Because the continuous blow requires a greater volume of natural gas to accomplish the same result, the court found that this method "increases the time and area required for the gas to fully disperse and reach concentrations where combustion will not occur."

The trial court relied on expert testimony regarding the "basic science" of combustion and "the physical characteristics of natural gas" in reaching these conclusions. The court also credited the testimony of six witnesses who had experience conducting gas blow procedures and found that each witness testified "that gas blows can be done safely if reasonable care is exercised and certain precautions are observed. . . . No witness with experience conducting gas blows testified that the procedure involved a 'high degree' of risk of harm *when reasonable safety precautions are put in place.*" (Emphasis added.) Thus, we agree with the trial court's factual finding that the exercise of reasonable care would have materially reduced the risk of harm to the point where the gas blow procedure could have been conducted safely.

Our conclusion, as well as our particular emphasis on this factor, is supported by *Whitman Hotel Corp.*

and *Caporale*. In *Whitman Hotel Corp.*, we reasoned that, even in the prototypical strict liability context of exploding dynamite, “it is essential that it appear that the dynamite was discharged under such circumstances that it, in fact, necessarily or obviously exposed the person or property of another to the danger of probable injury.” *Whitman Hotel Corp. v. Elliott & Watrous Engineering Co.*, supra, 137 Conn. 566. We then expanded on this language in *Caporale*: “The words ‘necessarily,’ ‘obviously’ and ‘probable’ imply that, *even if due care is employed*, there is an *unavoidable* risk of damage.” (Emphasis added.) *Caporale v. C. W. Blakeslee & Sons, Inc.*, supra, 149 Conn. 84. However, dynamite and pile driving, in their respective circumstances, are distinguishable from the gas blow procedure that we are considering because the exercise of reasonable care would have materially reduced the risk of harm and the potentially dangerous nature of the natural gas.

We find further support for our conclusion in *CNG Producing Co. v. Columbia Gulf Transmission Corp.*, 709 F.2d 959 (5th Cir. 1983). In that case, the plaintiffs’ offshore oil platform required repairs, which entailed a blowdown operation to vent natural gas from the platform’s metering station. *Id.*, 960–61. The natural gas was released through two pipes, one of which was pointed up toward an overhanging heliport so that the discharged natural gas accumulated in the partially enclosed area. See *id.*, 961. A spark from an exhaust fan ignited the accumulated natural gas, resulting in an explosion and fire. *Id.* The plaintiffs brought an action against the defendants, the companies that maintained the metering station, one of which was also a purchaser of the platform’s natural gas. See *id.*, 960–61. On appeal, the Fifth Circuit, applying Louisiana state law and a standard very similar to that of the Restatement (Second), held that the blowdown procedure was not ultra-hazardous, reasoning that, “if the gas had been vented away from the platform, where the gas would have had no place to accumulate and where no possible ignition source existed, these venting operations would have been performed without any risk.” *Id.*, 962. In other words, the court emphasized that “the activity of venting gas is likely to cause damage *only* when there is substandard conduct on someone’s part.” (Emphasis in original.) *Id.*

Although the blowdown procedure in *CNG Producing Co.* is not identical to the gas blow procedure employed here, both procedures involved the high-pressure discharge of natural gas, a flammable and potentially dangerous substance. In both procedures, natural gas was improperly allowed to accumulate in partially enclosed areas that were littered with obstructions and potential ignition sources. Finally, as to both procedures, reasonable precautions from prevailing industry practices and the basic science of combustion would have minimized the risk of gas accumulation and igni-

tion, which, in turn, would have significantly reduced the risk of harm. As both the Fifth Circuit and the trial court in the present case concluded, the explosions did not result from any substantial and unavoidable risk attendant to the procedures; rather, the explosions resulted from the failure to employ reasonable, industry standard precautions when handling a potentially dangerous gas.

The plaintiffs nonetheless contend that a significant risk remains even after the precautions noted by the trial court are employed, emphasizing the inherently dangerous attributes of natural gas. Specifically, the plaintiffs point to expert testimony that “the presence of three elements can cause a fire or explosion—a fuel source, an ignition, and air”—and that, “even with utmost caution, the natural gas still will ‘continuously [mix] with air on the way out’ of the [discharge nozzle], and that expelled gas will at some point reach the level of air-gas mixture that could spark an explosion.”

We are not persuaded, however, because *Caporale* foreclosed the plaintiffs’ reliance on the dangerous nature of natural gas alone. In that case, we explained that strict liability requires more than just a “dangerous instrumentality”; rather, strict liability applies when a potentially dangerous instrumentality “was used under such circumstances and conditions as necessarily and obviously to expose the person or property of another to probable injury even [when] due care [is] taken.” *Caporale v. C. W. Blakeslee & Sons, Inc.*, supra, 149 Conn. 83–84. In other words, we reasoned that the dangerous nature of the instrumentality must be considered alongside the circumstances and conditions of its use. See *id.*, 83–85. This reasoning is consistent with the six factors in § 520 of the Restatement (Second). The first two factors, concerning risk of harm and severity of potential harm, together measure the dangerous nature of the instrumentality. The other four factors measure the various circumstances and conditions that must inform the danger, including the location of the activity, the common usage of the activity, and the effect of reasonable care. Accordingly, in this case, the potentially dangerous nature of natural gas is not dispositive. We must consider what danger natural gas presents in the circumstances of the gas blow procedure when reasonable care is used.

As the trial court noted, the “cause of the explosion . . . was not a hazard intrinsic to the procedure itself or outside the control of those persons conducting the procedure; it was a failure to use proper care in conducting the procedure.” Positioning the discharge nozzle vertically into a well ventilated area would have materially reduced the risk of harm by removing obstructions that the expelled debris could have struck to trigger ignition. Minimizing the pressure and volume of natural gas used during the procedure would have materially

reduced the risk and severity of harm by decreasing the velocity of the expelled debris and, as a result, the likelihood that the debris would ignite the natural gas. Each precaution would have further reduced the risk and severity of harm by preventing the dangerous accumulation of natural gas to fuel any fire that might have ignited. In other words, reasonable precautions would have materially reduced the risk of harm, the severity of any resulting harm, and the generally dangerous attributes of natural gas.

Given that the activity involved a flammable substance, we recognize that some small risk of harm inherently remained. However, the significant reduction in the risk and severity of harm as a result of reasonable, industry standard precautions, paired with the appropriateness of the location, decisively outweigh the small remaining risk, the uncommon nature of the activity, and the small value to the community. Accordingly, we conclude that the gas blow procedure was not abnormally dangerous and that the plaintiffs cannot maintain a strict liability claim against the defendants.

II

We next consider the plaintiffs' contention that the trial court improperly granted the defendants' motions for summary judgment with respect to the plaintiffs' negligence claims. Specifically, the plaintiffs assert that the court incorrectly concluded that the defendants were not vicariously liable for O & G's negligence because no reasonable jury could find that the defendants exercised control over O & G's and its subcontractors' performance of the gas blow procedure. The defendants contend that the court correctly concluded that they did not exercise sufficient control over O & G or its subcontractors to overcome the general rule that an employer is not vicariously liable for the torts of its independent contractor.

Because this issue presents a different procedural posture than the prior issue, we begin with the standard of review. "The standard of review of a trial court's decision granting summary judgment is well established. Practice Book § 17-49 provides that summary judgment shall be rendered forthwith if the pleadings, affidavits and any other proof submitted show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law. In deciding a motion for summary judgment, the trial court must view the evidence in the light most favorable to the nonmoving party. . . . Our review of the trial court's decision to grant the defendant's motion for summary judgment is plenary. . . . On appeal, we must determine whether the legal conclusions reached by the trial court are legally and logically correct and whether they find support in the facts set out in the memorandum of decision of the trial court." (Citations omitted; internal quotation marks omitted.) *Lucenti v.*

Laviero, 327 Conn. 764, 772–73, 176 A.3d 1 (2018).

Furthermore, “[t]he essential elements of a cause of action in negligence are well established: duty; breach of that duty; causation; and actual injury.” (Internal quotation marks omitted.) *Pelletier v. Sordoni/Skanska Construction Co.*, 286 Conn. 563, 593, 945 A.2d 388 (2008). The plaintiffs’ claim concerns the duty element, specifically, whether the defendants owed any duty to the plaintiffs given the employer and independent contractor relationship between Kleen Energy and O & G. “If a court determines, as a matter of law, that a defendant owes no duty to a plaintiff, the plaintiff cannot recover in negligence from the defendant.” (Internal quotation marks omitted.) *Maffucci v. Royal Park Ltd. Partnership*, 243 Conn. 552, 567, 707 A.2d 15 (1998). “The issue of whether a defendant owes a duty of care is an appropriate matter for summary judgment because the question is one of law.” *Pion v. Southern New England Telephone Co.*, 44 Conn. App. 657, 660, 691 A.2d 1107 (1997). Accordingly, “[t]he existence of a legal duty is a question of law over which we exercise plenary review.” *Pelletier v. Sordoni/Skanska Construction Co.*, *supra*, 578.

The record, viewed in the light most favorable to the plaintiffs, establishes that O & G and two of its subcontractors performed the gas blow procedure. See footnote 2 of this opinion. The question of whether the defendants are nevertheless vicariously liable for any negligence that occurred during the procedure on the part of O & G or its subcontractors turns on the nature of the relationship between the defendants and O & G. “Vicarious liability is based on a relationship between the parties . . . under which it has been determined as a matter of policy that one person should be liable for the act of the other. Its true basis is largely one of public or social policy under which it has been determined that, irrespective of fault, a party should be held to respond for the acts of another.” (Internal quotation marks omitted.) *Alvarez v. New Haven Register, Inc.*, 249 Conn. 709, 720, 735 A.2d 306 (1999).

Connecticut law has recognized two distinct types of agents: employees and independent contractors. We have “adopted the definition that [a]n independent contractor is one who, exercising an independent employment, contracts to do a piece of work according to his own methods and without being subject to the control of his employer, except as to the result of his work.” (Internal quotation marks omitted.) *Darling v. Burrone Bros., Inc.*, 162 Conn. 187, 195, 292 A.2d 912 (1972). In other words, an “independent contractor contracts to produce a given result by methods under his own control.” *Aisenberg v. C. F. Adams Co.*, 95 Conn. 419, 421, 111 A. 591 (1920). In contrast, an “employee contracts to produce a given result, subject to the lawful orders and control of his employer in the means and methods

used in that employment.” Id. “The fundamental distinction between an employee and an independent contractor depends [on] the existence or nonexistence of the right to control the means and methods of work.” (Internal quotation marks omitted.) *Darling v. Burrone Bros., Inc.*, supra, 195–96. Accordingly, “[i]f the contract provides that the employer retains no control over the details of the work, but leaves to the other party the determination of the manner of doing it, without subjecting [the other party] to the control of the employer, the party undertaking the work is a contractor and not a mere employee.” Id., 195.

The legal principles governing the liability of an employer for the torts of its agents are well established. An employer is vicariously liable “for the wilful torts of his [employee] committed within the scope of . . . employment and in furtherance of [the employer’s] business.” *Pelletier v. Bilbiles*, 154 Conn. 544, 547, 227 A.2d 251 (1967). This is because “a fundamental premise underlying the theory of vicarious liability is that an employer exerts control, fictional or not, over an employee acting within the scope of employment, and therefore may be held responsible for the wrongs of that employee. . . . It is as a result of this control that the theory of vicarious liability allows employers to be subject to liability for the physical harm caused by the negligent conduct of their employees acting within the scope of employment.” (Citations omitted.) *Jagger v. Mohawk Mountain Ski Area, Inc.*, 269 Conn. 672, 693 n.16, 849 A.2d 813 (2004). In contrast, “[a]s a general rule, an employer is not [vicariously] liable for the negligence of its independent contractors. . . . The explanation for [this rule] most commonly given is that, [because] the employer has no power of control over the manner in which the work is to be done by the [independent] contractor, it is to be regarded as the contractor’s own enterprise, and [the contractor], rather than the employer, is the proper party to be charged with the responsibility of preventing the risk, and bearing and distributing it.” (Citations omitted; internal quotation marks omitted.) *Pelletier v. Sordoni/Skanska Construction Co.*, 264 Conn. 509, 517–18, 825 A.2d 72 (2003).

Although the plaintiffs refer to O & G as an independent contractor, this characterization is not dispositive of the question of whether the defendants are vicariously liable. Despite the general rule that an employer is not vicariously liable for the negligence of its independent contractor, we have often explained that there are exceptions to that rule. “If the work contracted for [is] unlawful, or such as may cause a nuisance, or is intrinsically dangerous, or in its nature is calculated to cause injury to others, or if the [employer] negligently employ[s] an incompetent or untrustworthy contractor, or if [the employer] reserve[s] in [the] contract general control over the contractor or his servants, or over the

manner of doing the work, or if [the employer] in the progress of the work assume[s] control or interfere[s] with the work, or if [the employer] is under a legal duty to see that the work is properly performed, [then] the [employer] will be responsible for [the] resultant injury. . . . So, too, the [employer] . . . will be liable for injury [that] results from his own negligence.” (Citations omitted; emphasis altered; internal quotation marks omitted.) *Id.*, 518. The plaintiffs’ claim of vicarious liability relies on this control exception, which provides that an employer will be vicariously liable for the negligence of its independent contractor if the employer (1) retains contractual control over the means or methods of the work, or (2) exercises actual control over the means or methods of the contractor’s performance.¹⁰ See *id.*

Thus, the defendants’ liability for the tortious conduct committed during the gas blow procedure hinges on the degree of control the defendants exercised over O & G’s performance of the procedure. “The word ‘control’ has no legal or technical meaning distinct from that given in its popular acceptance . . . and refers to the power or authority to manage, superintend, direct or oversee.” (Internal quotation marks omitted.) *Mozelski v. Thomas*, 76 Conn. App. 287, 294, 818 A.2d 893, cert. denied, 264 Conn. 904, 823 A.2d 1221 (2003). An employer’s partial control over the work may be enough to establish the existence of a duty. See, e.g., *Pelletier v. Sordoni/Skanska Construction Co.*, supra, 286 Conn. 599; *Van Nesse v. Tomaszewski*, 265 Conn. 627, 631, 829 A.2d 836 (2003). However, the employer “may exercise a limited degree of control or give the [independent] contractor instructions on minor details without destroying the independent character of the contractor.” *Mozelski v. Thomas*, supra, 293. “[When] the evidence on the question as to who had control of the area or instrumentality causing the injury is such that the mind of a fair and reasonable [person] could reach but one conclusion as to the identity of the person exercising control, the question is one for the court, but, if honest and reasonable [people] could fairly reach different conclusions on the question, the issue should properly go to the jury.” (Internal quotation marks omitted.) *Van Nesse v. Tomaszewski*, supra, 631.

A

We first consider whether Kleen Energy or PPMS retained contractual control over O & G’s performance of the gas blow procedures. See, e.g., *Pelletier v. Sordoni/Skanska Construction Co.*, supra, 264 Conn. 518 (employer is vicariously liable “if [the employer] reserve[s] in [the] contract general control over the contractor or his servants, or over the manner of doing the work” (internal quotation marks omitted)). The express terms of the “Engineering, Procurement and Construction Agreement” between Kleen Energy and O & G substan-

tially inform this analysis. At various points in the agreement, Kleen Energy and O & G agreed that O & G would maintain full care and responsibility for the power plant until “substantial completion,” a construction milestone triggered by certain conditions defined in the agreement, at which point care and responsibility for the power plant would revert to Kleen Energy. Most instructive is § 2.1 of the agreement, regarding the scope of O & G’s performance, which provides: “[O & G] shall fully perform all the [w]ork . . . all on a lump sum, fixed price, *turnkey basis* . . .” (Emphasis added.) The article in the agreement defining the various stages of completion provides in relevant part: “Upon [s]ubstantial [c]ompletion, [Kleen Energy] shall have care, custody and control of the [f]acility. . . .” Section 16.1 of the agreement, within the article concerning risk of loss, provides: “[O & G] shall have the full responsibility for care, custody and control of the [f]acility, the [f]acility [s]ite and the [w]ork . . . and shall bear the risk of loss of the [f]acility and the [w]ork in each case until [s]ubstantial [c]ompletion, at which time risk of loss shall pass to [Kleen Energy].” Consistent with these provisions, the agreement also specifies that “[Kleen Energy] shall furnish to [O & G] full and unrestricted access to the [f]acility [s]ite and all necessary rights of way and easements” Likewise, the parties agreed that O & G will be “fully and solely responsible to [Kleen Energy] for the acts and omissions of [O & G’s] subcontractors, vendors, and [p]ersons either directly or indirectly employed by any of them”

The turnkey nature of the agreement between Kleen Energy and O & G carries particular significance because, as the trial court explained, it indicates the parties’ intention that “O & G would handle all construction of the power plant and would hand [Kleen Energy] a completed and operational power plant.” Other courts have noted that “[a turnkey] contract has a certain well-defined meaning in law and in fact.” (Internal quotation marks omitted.) *Chapman & Cole v. Itel Container International B.V.*, 865 F.2d 676, 681 (5th Cir.), cert. denied sub nom. *Urquhart & Hassell v. Chapman & Cole*, 493 U.S. 872, 110 S. Ct. 201, 107 L. Ed. 2d 155 (1989). Black’s Law Dictionary defines an “engineering, procurement, and construction contract,” also termed a “turnkey contract,” as “[a] [fixed price], schedule-intensive construction contract—typical in the construction of single-purpose projects, such as energy plants—in which the contractor agrees to a wide variety of responsibilities, including the duties to provide for the design, engineering, procurement, and construction of the facility; to prepare start-up procedures; to conduct performance tests; to create operating manuals; and to train people to operate the facility.” Black’s Law Dictionary (11th Ed. 2019) p. 406. In a turnkey agreement, “the contractor agrees to complete the work of the building and installation to the point of readiness

for operation or occupancy.” (Internal quotation marks omitted.) *Chapman & Cole v. Itel Container International B.V.*, supra, 681. Upon completion, the owner can simply “turn the key” to use the newly constructed facility; (internal quotation marks omitted) *Zenergy, Inc. v. Performance Drilling Co., LLC*, 603 Fed. Appx. 289, 293 n.7 (5th Cir. 2015); but, until that point, the contractor generally “assumes all risks incident to the creation of [the] fully completed facility . . . and must bear the risk for all loss” (Citation omitted; internal quotation marks omitted.) *Chapman & Cole v. Itel Container International B.V.*, supra, 681; see, e.g., *Hawaiian Independent Refinery, Inc. v. United States*, 697 F.2d 1063, 1065 n.4 (Fed. Cir.) (“A [turnkey] job is defined as a job or contract in which the contractor agrees to complete the work of building and installation to the point of readiness for operation or occupancy. . . . Up to that point, the contractor assumes all risks.” (Citation omitted; internal quotation marks omitted.)), cert. denied, 464 U.S. 816, 104 S. Ct. 73, 78 L. Ed. 2d 86 (1983).

Here, the agreement specified that it was a “turnkey” project. Although the agreement did not define the term “turnkey,” it is a well-defined type of contract in the construction industry, particularly in the construction of power plants. Moreover, other substantive provisions of the agreement reinforce the turnkey nature of the agreement. For example, as we previously discussed, certain provisions in the agreement specified that O & G would have “the full responsibility for care, custody and control of the [f]acility . . . until [s]ubstantial [c]ompletion, at which time risk of loss shall pass to [Kleen Energy],” and that, “[u]pon [s]ubstantial [c]ompletion, [Kleen Energy] shall have care, custody and control of the [f]acility.” Thus, there is no genuine dispute that O & G had full contractual control over and responsibility for the construction of the power plant up to the point of substantial completion.

The plaintiffs point to no evidence that would raise a genuine dispute that substantial completion had not been reached at the time of the gas blow procedure and resulting explosion. Accordingly, and consistent with the express provisions of the agreement, we conclude that O & G, and not Kleen Energy, had contractual control over and responsibility for the performance of the activities attendant to the construction of the power plant, including the gas blow procedures. This falls squarely within the circumstance in which “the contract provides that the employer retains no control over the details of the work, but leaves to the other party the determination of the manner of doing it, without subjecting [the other party] to the control of the employer” *Darling v. Burrone Bros., Inc.*, supra, 162 Conn. 195. Accordingly, the trial court correctly emphasized that, because of the unambiguous, turnkey nature of the agreement, there was no genuine issue of material

fact regarding whether O & G had contractual control of the gas blow procedure. Our review of the record likewise persuades us that fair and reasonable minds could reach only one conclusion: Given O & G's exclusive contractual control over the construction of the power plant, the defendants did not exercise sufficient control over the gas blow procedure to establish the existence of a legal duty.

Despite these contractual provisions, the plaintiffs nevertheless claim that other provisions of the agreement between Kleen Energy and O & G establish that Kleen Energy effectively retained control over the construction of the power plant. Specifically, the plaintiffs point to § 14.1 of that agreement, which provides in relevant part that “[Kleen Energy] may at any time . . . suspend performance of the [w]ork . . . by giving written notice to [O & G].” The plaintiffs also claim that certain provisions of the agreement between Kleen Energy and PPMS establish that PPMS had contractual control over the gas blow procedures. Specifically, the plaintiffs point to exhibit C of that agreement, which articulates the services PPMS would provide and lists one responsibility as “[a]udit [O & G's] key processes—[s]afety, [q]uality, [m]aterial [r]eceiving, etc.”

We are not persuaded that these provisions destroy the independent nature of O & G's work. Kleen Energy's general right to suspend, pursuant to its agreement with O & G, cannot be construed to create a right for Kleen Energy “to control the means and methods” of O & G's performance of the work. (Internal quotation marks omitted.) *Darling v. Burrone Bros., Inc.*, supra, 162 Conn. 196. Likewise, any contractual duty imposed on PPMS by that provision of its agreement with Kleen Energy is too general to entail control over the “means and methods” of O & G's performance of the gas blow procedures. (Internal quotation marks omitted.) *Id.*

B

The plaintiffs also contend that, notwithstanding the terms of the agreements between Kleen Energy, O & G, and PPMS, the defendants in fact exercised control over the gas blow procedures, which satisfies the control exception. See, e.g., *Pelletier v. Sordoni/Skanska Construction Co.*, supra, 264 Conn. 518 (employers are vicariously liable if they “assume control or interfere with the work” (internal quotation marks omitted)). To support this argument, the plaintiffs identify two essential facts: the various activities of Gordon Holk, a PPMS employee representing Kleen Energy on the construction site, and the interactions between the defendants and Baker. The defendants contend that none of these facts creates a genuine issue of material fact as to whether Kleen Energy or PPMS exercised control over the gas blow procedures.

We first consider the plaintiffs' argument with respect

to Holk. The following additional facts are relevant to this argument. Four key individuals were involved in communications surrounding the gas blow procedures: Holk, the lead PPMS employee on the site, who represented Kleen Energy; Andrew Pike, a member of the board of members of Kleen Energy; Lou Kesselman, a senior O & G employee and the O & G manager of the project; and C.J. Meeske, a contact with the supplier of natural gas used to conduct the gas blow procedure. In December, 2009, approximately six weeks before the first day of gas blow procedures, Pike e-mailed various O & G and subcontractor employees with instructions to include Holk “on *all* issues (regardless of materiality) as soon as such arise. As [Kleen Energy’s] representative, [Holk] is the principal contact for *all* third-party activity associated with Kleen Energy.” (Emphasis in original.) The e-mail concluded: “Effectively, [Holk] should be considered the gatekeeper of all Kleen [Energy] related activity.”

The same day, Holk e-mailed various Kleen Energy and O & G employees, requesting “some details” about the gas blow procedures and explaining that he “need[ed] to approximate the amount of gas [O & G] will need and when.” Subsequently, at the end of December, 2009, an O & G employee e-mailed Holk a document titled “Gas Blow Procedure,” and Holk responded that he would “look [it] over” because it “may be the first time your boys may be turning valves.”

At the same time, Kesselman e-mailed Holk, requesting that PPMS and Kleen Energy order the specific quantity of natural gas O & G would need for the gas blow procedure. Holk forwarded the e-mail to Pike, who, copying Holk, forwarded the e-mail to Meeske, the contact with the supplier of natural gas, and those three individuals exchanged a series of e-mails in January, 2010, discussing the issue. Specifically, Meeske sent a reply e-mail, questioning whether the specified quantity of natural gas requested would be sufficient to clear the debris given the dimensions of the pipes. Holk responded to Meeske: “We discussed this internally and all of us non-O & G folks believe this was way too low. But the smart one at O & G think[s] this is enough. . . . I would like to do exactly what O & G wants and let them live and learn.” Around the same time, a document titled “Responsibility Matrix for Meeting Date 1/19/10” identified Holk as the “[r]esponsible [i]ndividual” for, among other activities, the gas blow procedures.

Soon thereafter, around the end of January, 2010, and a few days before the first day of gas blow procedures, Holk e-mailed Kesselman to inform O & G that “[w]e have gas nominated for Saturday [January 30, 2010]. Blow baby blow.” In early February, 2010, after the first day of gas blow procedures but before the second day, Kesselman, copying Pike, e-mailed Holk again to request

that he order natural gas for the second set of gas blow procedures. Holk e-mailed Meeske to order the natural gas, then subsequently confirmed to Kesselman: “We have gas for [the designated days]. [You’re] clear to blow.” This second set of gas blow procedures took place on February 7, 2010, and caused the explosion.

The plaintiffs point to these details to support their contention that Holk exercised control over the gas blow procedures on behalf of Kleen Energy and PPMS. Specifically, they note that Holk was designated as the “‘gatekeeper’” for the project by Kleen Energy, as well as the “‘[r]esponsible [i]ndividual’” on the “‘Responsibility Matrix,’” he stated that he had to “‘look . . . over’” the procedure before ordering the natural gas, he then communicated O & G’s order of natural gas to the supplier and was skeptical that it would be sufficient to complete the procedure, he provided “formal clearance” for O & G to conduct the gas blow procedures, and he “cheer[ed], ‘[b]low baby blow.’” (Emphasis omitted.) The plaintiffs contend that these facts establish that Holk was “an essential actor in the process.”

We disagree. Even if we view these facts in the light most favorable to the plaintiffs, Holk’s involvement in the gas blow procedure is entirely consistent with Kleen Energy’s contractual right to oversee O & G’s work. Specifically, § 2.14.1 of the agreement between Kleen Energy and O & G provides in relevant part: “The [w]ork may be monitored and inspected at any time during working hours by [Kleen Energy], its duly authorized agents, servants, and employees. Such right to monitor and inspect, however . . . shall not create the right to stop or otherwise materially impede the [w]ork or relieve [O & G] of any of its responsibilities hereunder”

We have previously held that the presence of an employer representative at a construction site does not demonstrate sufficient control to overcome the general rule that an employer is not liable for the torts of its independent contractor. In *Darling*, the president of a corporation hired the defendant independent contractor to excavate a ditch to accommodate a storm drain. See *Darling v. Burrone Bros., Inc.*, *supra*, 162 Conn. 189. The president of the corporation was present at the job site and instructed an employee of the independent contractor regarding the placement and depth of the ditch, and he periodically inspected the work to ensure satisfactory performance. *Id.*, 193. We reasoned that the president’s involvement “signifie[d] no more than the furnishing of specifications for the job. It [did] not demonstrate control of the manner and means of accomplishing the digging. It [was] apparent that [the employer’s president] did no more than exercise his right to supervise the general result and also the immediate results, from time to time, as the work progressed.” *Id.* We derived a generally applicable rule from

this case: “[When a representative of the employer] has no authority to interfere with the manner of operation, he has no effect on the determination of the one in control.” *Id.*, 194; see, e.g., *Archambault v. Soneco/Northeastern, Inc.*, 287 Conn. 20, 56, 946 A.2d 839 (2008) (noting that employer’s representative “had overall responsibility for safety on the work site” but reasoning that he did not “[retain] direct control over” independent contractor’s work).

This rule is consistent with Holk’s involvement in the gas blow procedure. Holk did no more than exercise Kleen Energy’s contractual right to monitor, inspect, and coordinate the various construction tasks performed by O & G, its subcontractors, and Kleen Energy. Specifically, Pike’s e-mail instructing the representatives of all the entities to include Holk in communications involving Kleen Energy cannot be construed to create a right for Holk to control the means and methods of O & G’s performance of the gas blow procedures. Rather, this reasonably demonstrates only that the project involved many different actors, performing a variety of functions, and that Kleen Energy wanted to establish clear lines of communication to ensure smooth collaboration. In addition, the plaintiffs contend that the “ ‘Responsibility Matrix’ ” memorialized Holk’s responsibility for the gas blow procedures. However, even if we accept the plaintiffs’ characterization of this document, this does not rise to the level of control required to establish vicarious liability *as a matter of law*. As we explained in *Darling*, supervision of a construction task to ensure that it is ultimately completed according to the employer’s requirements is not enough to establish control over the means and methods of the contractor’s performance of that task.¹¹ See *Darling v. Burrone Bros., Inc.*, supra, 162 Conn. 193; see also, e.g., *Archambault v. Soneco/Northeastern, Inc.*, supra, 287 Conn. 56. Furthermore, Holk’s skepticism about O & G’s requested quantity of natural gas and his e-mails “clear[ing]” O & G to conduct the gas blow procedures do not demonstrate sufficient control over the procedure as a matter of law. Even if we construe Holk’s conduct in the light most favorable to the plaintiffs, these facts certainly do not demonstrate greater control than the conduct of the employer’s representative in *Darling*, who provided precise instructions to the contractor during excavation of a ditch, which we held did not establish sufficient control as a matter of law to support vicarious liability. *Darling v. Burrone Bros., Inc.*, supra, 193; see footnote 11 of this opinion.

All of these activities are consistent with the principle that an employer “may exercise a limited degree of control or give the [independent] contractor instructions on minor details without destroying the independent character of the contractor.” *Mozeleski v. Thomas*, supra, 76 Conn. App. 293. There is no genuine issue of material fact with respect to Holk’s involvement in the

gas blow procedures. We agree with the trial court that no reasonable jury could conclude that Holk had substantive control over the means or methods involved in O & G's performance of the gas blow procedures.

We next consider the plaintiffs' argument with respect to Baker, the supervisor of the gas pipeline safety unit of the department. See footnote 8 of this opinion. The following additional facts are relevant to this argument. At the time of the explosion, the department generally regulated the rates, performance, and safety of public service companies. In addition, the gas pipeline safety unit "exercise[d] regulatory safety authority over interstate natural gas transmission companies and intrastate natural gas distribution companies in Connecticut." In late January, 2010, Baker requested a phone call from Kleen Energy after he became aware that Kleen Energy planned to introduce natural gas into its pipelines for the gas blow procedures without first introducing nitrogen, contrary to the customary practice of the gas industry. Robert Haley, a senior employee of the NAES Corporation, which had contracted with Kleen Energy to take responsibility for the operation of the power plant upon completion, spoke with Baker about the planned gas blow procedures.

Baker recalled the substance of his conversation with Haley in a report he prepared for the department soon after the explosion, as well as in subsequent testimony. During his conversation with Haley, Baker expressed concern about the planned gas blow procedure and explained that cleaning operations "are normally conducted using [nitrogen, compressed air, or water] to avoid creating a combustible natural gas/air mixture" Baker testified that he and Haley spoke "about how [the department does] things in the gas industry. [Haley] explained how they do things in the power industry. They didn't . . . line up." Baker further testified that the "gas industry" does not employ natural gas to clear fuel supply pipelines because "using a flammable substance to clean pipe versus an inert substance adds some additional danger to the operation." Baker testified that Haley explained that "this is how they do it in the power business; they do it all over the world this way. They've done tons of power plants, and this is just the way it's done, and they've done it safely." Baker and Haley spoke about various precautions, including minimizing personnel on the construction site, removing ignition sources, and introducing nitrogen into the piping beforehand. Haley then sent an e-mail to various PPMS and O & G individuals to inform them that he had spoken with Baker. Subsequently, Baker and Haley held a similar conversation after the first day of gas blow procedures but before the second day. For his part, Haley testified that he could not recall the identity of the department employee with whom he spoke or the substance of their conversation, and that he did not convey Baker's guidance to Kleen Energy,

PPMS, or O & G.

The plaintiffs contend that Kleen Energy and PPMS exercised control over the gas blow procedures because of Haley's conversation with Baker, the failure of Kleen Energy and PPMS to take the precautions that Haley and Baker discussed, and their refusal to follow Baker's recommendation that O & G clean the fuel supply pipelines with a noncombustible substance. We are not persuaded, however, because Haley was not an employee of Kleen Energy or PPMS. He was an employee of the NAES Corporation, an entity that is not a party to this appeal, had no contractual authority regarding the power plant until its completion, and had no authority whatsoever over O & G. The plaintiffs assert, in a cursory fashion, that Haley acted on Kleen Energy's behalf during construction because his e-mail address and signature referenced Kleen Energy, but these facts are insufficient to render Haley's actions legally attributable to Kleen Energy.

Moreover, to the extent that the plaintiffs contend that Haley's actions could be attributable to Kleen Energy and construed as instructing O & G to defy Baker's warnings, we are not persuaded that such actions would inform the determination of control given that the department had no jurisdiction over the power plant. The gas pipeline safety unit's "jurisdiction over natural gas end[ed] at the connection to an [end user] of natural gas because, at this point, the gas is no longer involved in transportation." Consequently, and as the plaintiffs concede, the department's gas pipeline safety unit had no jurisdiction over the transmission of natural gas through the power plant's fuel supply pipelines. In addition, Kleen Energy was not subject to the department's ratemaking, performance, and safety regulatory authority because it is a federally designated wholesale generator, which is specifically exempt from the statutory definition of a "public service company" within the department's jurisdiction. The plaintiffs contend that "[j]urisdiction, or lack thereof, does not change the fact that Kleen [Energy] was warned that its plans were unsafe but chose to [execute them] anyway." (Internal quotation marks omitted.) We fail to see how this informs the control determination. It was not within Kleen Energy's contractual power to interfere with the means or methods of O & G's performance of construction activities. As the trial court reasoned, Baker's warnings did not put "[Kleen Energy] or [PPMS] in charge of the gas blow. There is simply no genuine dispute that O & G was building the plant." Accordingly, we conclude that the trial court properly granted the defendants' motions for summary judgment.

III

Finally, the plaintiffs make two additional arguments to support their contention that summary judgment with respect to their negligence claims was improper.

First, the plaintiffs contend that, regardless of our determination of the control question, the defendants are nevertheless vicariously liable for O & G's negligence because O & G was engaged in an intrinsically dangerous activity, which satisfies a distinct exception to the general rule that an employer is not liable for the torts of its independent contractor. Second, the plaintiffs contend that, notwithstanding the level of control the defendants exercised over O & G, their negligence claims survive because the defendants were directly negligent. The defendants disagree. Kleen Energy asserts that Connecticut law does not recognize the intrinsically dangerous exception articulated in the Restatement (Second) of Torts, and both defendants assert that the record does not support a claim of direct negligence. For the following reasons, we decline to review both arguments as inadequately briefed.

“We repeatedly have stated that [w]e are not required to review issues that have been improperly presented to this court through an inadequate brief. . . . Analysis, rather than mere abstract assertion, is required in order to avoid abandoning an issue by failure to brief the issue properly. . . . [F]or this court judiciously and efficiently to consider claims of error raised on appeal . . . the parties must clearly and fully set forth their arguments in their briefs. . . . The parties may not merely cite a legal principle without analyzing the relationship between the facts of the case and the law cited.” (Citation omitted; internal quotation marks omitted.) *State v. Buhl*, 321 Conn. 688, 724, 138 A.3d 868 (2016).

We first consider the plaintiffs' argument that summary judgment with respect to their negligence claims was improper because the gas blow procedure satisfies the “intrinsically dangerous” exception to the general rule that an employer is not vicariously liable for the negligence of its independent contractor. As we noted, there are several exceptions to that general rule, including when the employer retains contractual control or exercises actual control over the contractor's performance of the work; see part II of this opinion; and when the work contracted for “is intrinsically dangerous” (Internal quotation marks omitted.) *Pelletier v. Sordoni/Skanska Construction Co.*, supra, 264 Conn. 518; see, e.g., *Taylor v. Conti*, 149 Conn. 174, 178, 177 A.2d 670 (1962) (“[when an employer] contracts for work to be done of such a character that, even if the work is duly performed, it would naturally, if not necessarily, expose others to probable injury unless preventive measures are taken by [the employer], [then the employer] is liable for that injury if, while chargeable with knowledge that the work is of such a character, [the employer] negligently fails to take preventive measures”). We have also noted that the latter exception is similarly expressed in § 413 of the Restatement (Second) of Torts.¹² See, e.g., *Pelletier v. Sordoni/Skanska*

Construction Co., supra, 286 Conn. 597–98. The plaintiffs contend that, pursuant to our case law and § 413 of the Restatement (Second), the gas blow procedure was intrinsically dangerous and, therefore, the defendants are vicariously liable for O & G’s negligence.¹³ Thus, the plaintiffs contend, rendering summary judgment as to their negligence claims on a theory of vicarious liability was improper.

We decline to review this issue on the ground that it is inadequately briefed. The plaintiffs’ analysis of the issue is minimal and conclusory given the complexity of the claim raised. Section 413 of the Restatement (Second), on which the plaintiffs rely, is only one section out of a series concerning the issue of employer liability in an independent contractor relationship. Specifically, comment (a) to § 413 cross-references § 416 of the Restatement (Second). See 2 Restatement (Second), Torts § 413, comment (a), p. 385 (1965). Comment (a) to § 416, in turn, emphasizes that that section is informed by § 427, which restates the same essential rule but applies in contexts when “the danger involved in the work calls for a number of precautions, or involves a number of possible hazards, as in the case of blasting” *Id.*, § 416, comment (a), p. 395; see *id.*, § 427, p. 415. In addition, comment (d) to § 427 emphasizes that that section must be read alongside § 426 of the Restatement (Second). See *id.*, § 427, comment (d), p. 417. Comment (a) to § 426 explains that an employer is protected from vicarious liability if the independent contractor committed “‘collateral negligence,’” or “negligence in the operative detail of the work” *Id.*, § 426, comment (a), p. 414.

The plaintiffs do not discuss the nuanced applicability of these various provisions. Their references to §§ 413, 416 and 427, and to comment (c) to §§ 413 and 427, are conclusory and lack meaningful analysis. See, e.g., *MacDermid, Inc. v. Leonetti*, 328 Conn. 726, 748, 183 A.3d 611 (2018). This issue accounts for only one page of their thirty-five page brief. See, e.g., *Connecticut Light & Power Co. v. Gilmore*, 289 Conn. 88, 124, 956 A.2d 1145 (2008) (litigant “devote[d] little more than [one] page of her [total briefing] to the discussion of her claim, limiting her argument to . . . bare assertion”). Furthermore, even if we were to agree with the plaintiffs that the gas blow procedure is intrinsically dangerous in satisfaction of that exception to the general rule precluding employer liability, such a conclusion would establish only the duty element of the negligence claims. The plaintiffs’ brief does not discuss any impropriety in the trial court’s conclusion that, regardless of the duty element, the plaintiffs failed to raise a genuine issue of material fact with respect to the causation element of their negligence claims. Accordingly, we cannot fully and fairly evaluate the merits of the plaintiffs’ argument, and we decline to consider it.

The plaintiffs' second additional argument is that their negligence claims survive summary judgment, notwithstanding the employment relationship between the defendants and O & G, because the defendants were directly negligent. The plaintiffs point to three facts in support of their direct negligence claim: (1) the defendants ordered the natural gas required for the gas blow procedure; (2) PPMS did not conduct "safety audits" as required; and (3) the defendants ignored warnings about the danger of the gas blow procedure from Baker, the supervisor of the gas pipeline safety unit. See part II of this opinion. The plaintiffs contend that "[t]he unsafe gas blows never would have happened without" the defendants' commission of those three acts.

As with the first additional argument, the plaintiffs' treatment of this issue is conclusory, lacking meaningful analysis of the limited legal authority cited. The plaintiffs assert only that the defendants were negligent in ordering the natural gas and permitting O & G to employ the gas blow procedure. The plaintiffs do not connect those actions to the foreseeability of the harm or the policy considerations that inform the duty inquiry. See, e.g., *Pelletier v. Sordoni/Skanska Construction Co.*, supra, 286 Conn. 593–94 ("Duty is . . . imperative to a negligence cause of action. . . . [O]ur threshold inquiry has always been whether the specific harm alleged by the plaintiff was foreseeable to the defendant. . . . The final step in the duty inquiry . . . is to make a determination of the fundamental policy of the law, as to whether the defendant's responsibility should extend to such results." (Internal quotation marks omitted.)). Likewise, the plaintiffs do not provide any authority or analysis to raise a genuine issue of material fact with respect to the causation element. Accordingly, we cannot fully and fairly evaluate the merits of this issue, and we decline to consider it.

The judgment is affirmed.

In this opinion the other justices concurred.

* December 30, 2021, the date that this decision was released as a slip opinion, is the operative date for all substantive and procedural purposes.

¹ Specifically, the trial court found that "PPMS was required to conduct all of [Kleen Energy's] accounting and bookkeeping functions, [to] monitor the performance of third parties who were under contract with [Kleen Energy], and to support [Kleen Energy] in the completion of certain construction phase requirements. The construction phase requirements included assisting with efforts to secure permits, coordinating the delivery of oil and chemicals to support operational testing, performing construction walk-downs and providing assessments to [Kleen Energy], and auditing O & G's progress, quality, and safety on the construction site."

² Specifically, Richard Audette, the project director for the Kleen Energy project at O & G and the most senior O & G employee on-site at the time of the gas blow procedures, testified that the subcontractor Keystone Construction & Maintenance Services, Inc., managed the gas blow procedures, while the subcontractor Bluewater Energy Solutions, Inc., exercised oversight. Audette further testified that his understanding of the collaboration involved in the procedure was that O & G was "prepared" to start the gas blow procedure "with the assistance of" the two subcontractors but that O & G had "the responsibility, basically, at the end of the day, to make sure this activity occur[ed]" (Internal quotation marks omitted.)

Furthermore, e-mail communications between O & G and Kleen Energy employees reflect that O & G requested Kleen Energy to order the natural gas that two of its subcontractors would need for the procedures. As the owner, Kleen Energy was contractually responsible for placing the order for natural gas.

³ Specifically, James L. Thompson II alleged that he suffered a head injury, multiple sprains, strains, and contusions, tinnitus, sleep insomnia, and post-traumatic stress disorder. Carol M. Thompson, his wife, alleged loss of consortium. James McVay alleged that he suffered lacerations on his face, loss of hearing, injury to his right knee, lumbar strain, cervical spondylosis, whiplash, and post-traumatic stress disorder. Nine plaintiffs—injured employees and their spouses—have been removed since the original 2010 complaint was filed.

⁴ Several other parties have been named as defendants in the present case, including O & G's subcontractors and the manufacturer of the gas turbines. However, none of these additional defendants is involved in the present appeal. We hereinafter refer to Kleen Energy and PPMS as the defendants.

⁵ In the context of strict liability, these terms are effectively identical. Having not previously adopted the rule from the Restatement (Second), we have typically framed the inquiry by considering whether the activity is “intrinsically dangerous” *Caporale v. C. W. Blakeslee & Sons, Inc.*, supra, 149 Conn. 85; accord *Whitman Hotel Corp. v. Elliott & Watrous Engineering Co.*, 137 Conn. 562, 565, 79 A.2d 591 (1951). The first Restatement of Torts employed the term “ultrahazardous activity,” which many courts still use. 3 Restatement, Torts § 520, p. 42 (1938); see id., §§ 519 through 524, pp. 41–53. The Restatement (Second) of Torts replaced this term with “[a]bnormally [d]angerous [a]ctivities.” 3 Restatement (Second), supra, § 520, p. 36; see 4 Restatement (Second), Torts app. § 520, reporter's note, p. 65 (1981). As the trial court noted, “courts and litigants commonly use [these] terms all but interchangeably.” For consistency, we employ the term “abnormally dangerous activity” in this context, except in instances of quoted material.

⁶ PPMS contends that “the doctrine of strict liability for an ultrahazardous activity cannot apply to a party who had no control over the activity.” Thus, PPMS maintains, the control question is a threshold issue to the strict liability claim, as well as the dispositive issue to the negligence claim. The plaintiffs and Kleen Energy do not address whether the control question is a threshold question to the strict liability claim. The only express guidance provided by the Restatement (Second) on this question is to state that strict liability attaches to the party that “carries on” the abnormally dangerous activity. 3 Restatement (Second), supra, § 519 (1), p. 34. Because we conclude that the gas blow procedure is not abnormally dangerous, we need not decide whether the plaintiffs' strict liability claim could survive irrespective of our resolution of the control question.

⁷ Section 20 of the Restatement (Third) of Torts, Liability for Physical and Emotional Harm, reframes the rule for strict liability in the context of abnormally dangerous activities. Specifically, it provides: “(a) An actor who carries on an abnormally dangerous activity is subject to strict liability for physical harm resulting from the activity.

“(b) An activity is abnormally dangerous if:

“(1) the activity creates a foreseeable and highly significant risk of physical harm even when reasonable care is exercised by all actors; and

“(2) the activity is not one of common usage.” 1 Restatement (Third), Torts, Liability for Physical and Emotional Harm § 20, p. 229 (2010). The trial court, however, evaluated the plaintiffs' strict liability claim according to the six factor test articulated in § 520 of the Restatement (Second), and all parties to the present appeal agree that this is the applicable test. Accordingly, we evaluate the plaintiffs' strict liability claim pursuant to the Restatement (Second). Moreover, we note that the principal difference between the two Restatement revisions is the framework of the inquiry. The Restatement (Third) captures the same core substantive concerns as the Restatement (Second), as well as our decisions in *Whitman Hotel Corp.* and *Caporale*. As a result, the outcome of our analysis would be the same under the Restatement (Third) and the Restatement (Second).

⁸ “The legislature . . . designated the [Public Utilities Regulatory Authority within the Department of Energy and Environmental Protection] as the replacement for the Department of Public Utility Control, effective July 1, 2011.” *Kleen Energy Systems, LLC v. Commissioner of Energy & Environmental Protection*, 319 Conn. 367, 370 n.1, 125 A.3d 905 (2015). However,

at all relevant times, Baker's position as the supervisor of the gas pipeline safety unit did not change. For convenience, we hereafter refer to both the Public Utilities Regulatory Authority and the Department of Public Utility Control as the department.

⁹ The plaintiffs contend that the availability of alternative procedures to clear the fuel supply pipelines involving inert substances is "vital" to the entirety of the abnormally dangerous activity determination. We disagree. Throughout the briefing, all parties characterize the "activity" in question as the gas blow procedure, the procedure that was employed in this case. The availability of alternative procedures involving inert substances would be relevant only if the activity were characterized as the defendants' clearing the fuel supply piping generally. The plaintiffs, however, do not articulate the inquiry in those terms. Accordingly, like the trial court, we consider these alternative procedures only with respect to the sixth factor, regarding the gas blow procedure's value to the community, and not with respect to the other five factors.

¹⁰ We note that the control exception appears to be definitional in this case: If the defendants retained sufficient control over O & G to satisfy this exception, then, by definition, O & G would be properly classified as an employee, not an independent contractor. Compare *Aisenberg v. C. F. Adams Co.*, supra, 95 Conn. 421 (employee is "subject to the lawful orders and control of his employer," whereas independent contractor employs "methods under his own control"), with *Pelletier v. Sordoni/Skanska Construction Co.*, supra, 264 Conn. 518 (employer is liable for negligence of independent contractor if employer had contractual or actual control over independent contractor). In other words, the classification of an agent as either an independent contractor or an employee for the purposes of vicarious liability requires us to consider the same core issue as the control exception: whether the employer had control over the agent's means or methods to complete the work. Because the plaintiffs refer to O & G as an independent contractor, we focus our inquiry on the control exception.

¹¹ We note that *Archambault* and *Darling* both involved appeals following jury verdicts, not the granting of summary judgment motions. *Archambault v. Sonoco/Northeastern, Inc.*, supra, 287 Conn. 29; *Darling v. Burrone Bros., Inc.*, supra, 162 Conn. 189. However, the existence of a duty of care is always a question of law. See, e.g., *Pion v. Southern New England Telephone Co.*, supra, 44 Conn. App. 660. In addition, with respect to vicarious liability, "the question as to who had control of the area or instrumentality causing the injury" is one of law for the court to determine when "the mind of a fair and reasonable [person] could reach but one conclusion . . ." (Internal quotation marks omitted.) *Van Nesse v. Tomaszewski*, supra, 265 Conn. 631. Those cases reveal that, outside the context of summary judgment, the court must consider the record in order to determine how to instruct the jury with respect to the legal questions of duty and control. *Id.* Because those cases involve challenges to the court's determination of the same legal questions at issue in this case, they are applicable here.

¹² Section 413 of the Restatement (Second) of Torts provides: "One who employs an independent contractor to do work which the employer should recognize as likely to create, during its progress, a peculiar unreasonable risk of physical harm to others unless special precautions are taken, is subject to liability for physical harm caused to them by the absence of such precautions if the employer

"(a) fails to provide in the contract that the contractor shall take such precautions, or

"(b) fails to exercise reasonable care to provide in some other manner for the taking of such precautions." 2 Restatement (Second), Torts § 413, pp. 384–85 (1965).

¹³ Comment (b) to § 427 of the Restatement (Second) notes that this rule "is commonly expressed by the courts in terms of liability of the employer for negligence of the contractor in doing work which is 'inherently' or 'intrinsically' dangerous." 2 Restatement (Second), Torts § 427, comment (b), p. 416 (1965). We use the term "intrinsically dangerous activity" in part III of this opinion to refer to an activity that supports the exception to the general rule that an employer is not vicariously liable for the negligence of its independent contractor. We briefly note that the parties do not address, and therefore we do not consider, the substantive interplay between the "abnormally dangerous" activities that support a claim of strict liability pursuant to § 520 of the Restatement (Second), which we have previously termed "intrinsically dangerous"; see footnote 5 of this opinion; and the "intrinsically dangerous" activities that give rise to employer liability in

negligence pursuant to §§ 413 and 427 of the Restatement (Second).
