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COMMON LAW REMEDIES AND THE UST
REGULATIONS

Allison Rittenhouse Hayward*

I. INTRODUCTION

The corner gasoline station is a fixture in modern society. Each station keeps its supply of gasoline in underground storage tanks (USTs). For many years these tanks were made of bare steel, and installed without much concern for their potential environmental impact. As these tanks aged, however, corrosion wore away the steel hulls and many began to leak. Once leaking gasoline contaminated local water supplies, tank owners faced potentially enormous expenditures to clean up their leaks and compensate injured neighbors. Small gas station operators often lacked the financial ability to pay for this remediation and compensation.

A popular myth in environmental law has maintained that individuals injured by pollution, such as a leaking tank, had little recourse at common law. An examination of common law actions for private nuisance, trespass, public nuisance and strict liability tells a different story. In fact, polluters often found themselves facing a successful plaintiff armed with a court injunction, and thus could choose either to bargain with the neighbor or cease business.1 Common law provided several remedies for victims of gasoline storage tank contamination.

Many political and technological influences, however, combined to support the notion that the private legal system could not adequately handle pollution from USTs. Congress passed comprehensive statu-

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1 See infra notes 14–17 and accompanying text.
tory regulations for USTs in 1984. These statutes and their implementing regulations create a cradle-to-grave regulatory regime to prevent leaking USTs from polluting groundwater. They set technological standards, notice requirements, remediation specifications, and penalties for violators. In an effort to manage this environmental problem better, the UST statutes also provide for state implementation and enforcement of their provisions.

These regulations have affected UST owners and litigants in several ways. First, they provide for large penalties for leaking tanks. At the same time, they harshly penalize conduct that results in no direct harm to the community. Furthermore, because states, following federal guidance, have set up funds for site remediation, communities depend on increasingly-strained state fund budgets to clean contaminated soil and water.

Perhaps the common law approach contains several flaws, but this Article argues that the regulatory regime that has generally replaced private law remedies does no better, and perhaps does worse. In Section I, this article examines the common law causes of action available to a plaintiff at the turn of the century. Section II turns to the UST statutes and regulations, and analyzes their text and purpose. Section III contains a discussion of administrative enforcement of UST regulations on the federal and state levels. Section IV returns to the common law, to evaluate how UST regulations have affected UST litigation.

II. Actions to Remedy Pollution Damage at Common Law

A. The Common Law at the Turn of the Century

Several causes of action were available to a plaintiff at common law to protect and compensate him from toxic harm. For example, a plaintiff could request injunctive relief from the court that would

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3 Id.
5 See infra notes 182-87 and accompanying text.
6 See infra notes 222-31 and accompanying text.
7 See infra notes 11-80 and accompanying text.
8 See infra notes 81-184 and accompanying text.
9 See infra notes 185-248 and accompanying text.
10 See infra notes 249-87 and accompanying text.
11 This paper considers only common law actions after the demise of the writ system. For a thorough review of medieval actions to remedy nuisance-like harms, see Jeff L. Lewin, Boomer and the American Law of Nuisance: Past, Present, and Future, 54 ALB. L. REV. 189 (1990).
require a polluter to cease a polluting activity. Also, a plaintiff could seek monetary damages for harm caused by pollution. Generally, these two types of remedies were sought in an action for private nuisance. In some cases, however, plaintiffs could pursue trespass and strict liability actions for dangerous activities as well. In addition, the local authorities could use police powers to prosecute an offender for a public nuisance.

Early common law judges generally cited the maxim *sic utere tuo ut alienum non laedas,* or "use your own so as not to injure others," when faced with a nuisance action. This maxim, when followed literally, leads to a strict liability rule for private nuisance. For ongoing nuisances, courts often granted injunctive relief as a remedy. An injunction would require a defendant to alter his practices to remove the nuisance, or otherwise cease operations. Therefore, in cases where a plaintiff obtained injunctive relief the effect of this doctrine was to allow a nuisance plaintiff to shut down the defendant’s business.

The drastic result from using both the *sic utere* maxim and an injunctive remedy often led courts to seek ways to modify their

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Out of necessity, the common law cases considered by this paper only go back as far as the cases posted for each state in Westlaw’s ALLSTATES-OLD Library. The first date varies from state to state. Nuisance actions for environmental harm were also very uncommon in early American history. See Paul M. Kurtz, *Nineteenth-Century Anti-entrepreneurial Nuisance Injunctions-Avoiding the Chancellor,* 17 WM. & MARY L. REV. 621, 624 n.23 (1976) (listing 9 nuisance actions reported from 1789 to 1836).

The damages/injunction bifurcation dates back to medieval common law writs. Plaintiffs could seek nuisance abatement through the assize of nuisance, however, the system limited access to this writ. Courts thus allowed plaintiffs to seek damages through trespass on the case for private nuisance or for special damage resulting from a public nuisance. If a plaintiff was ineligible for the assize of nuisance, yet would not be adequately compensated by monetary damages, he could seek injunctive relief in a court of equity. See Lewin, *supra* note 11, at 194–95.

Plaintiffs could use common law nuisance to remedy a variety of activities aside from pollution. Of the 71 pre-1900 cases in which plaintiffs pled private nuisance available in Westlaw’s ALLSTATES Library, 21 sought damages or an injunction for polluting nuisances. Six of these involve sewage discharge. Plaintiffs pled private nuisance to remedy a variety of other community ills from noise to flooding to prostitution.

See, e.g., Camfield v. United States, 167 U.S. 518, 522 (1897).

rulings. One method required that a plaintiff pursue his case at law to establish his right to recovery before a court sitting in equity would provide injunctive relief. Courts would also deny recovery to plaintiffs if they found that the nuisance was a public nuisance, because the plaintiff’s injury was no different than that shared by his community. Similarly, some courts denied plaintiffs recovery if the nuisance was the kind of harm they should be expected to tolerate, given the nature of their community. Other courts extended this to hold that if an activity was lawful, it could not be classified as a private nuisance. Furthermore, some courts weighed the defendant’s economic
role against the plaintiff's loss in their exercise of equitable discretion, to prevent a small landowner's successful nuisance action from adversely affecting the community's economy. Finally, in other cases, courts drew a distinction between activities that were nuisance per se, and thus subject to strict liability, and nuisances in fact. To recover against a nuisance in fact, the plaintiff would have to plead and prove that the defendant's negligence caused the nuisance.

Although nuisance actions often sought injunctive relief, courts also provided monetary damages to successful plaintiffs. Generally, plaintiffs would obtain monetary damages for past harm from a nuisance that had ceased, and injunctive relief for an ongoing nuisance. Injunctions could also be obtained against an activity considered a nuisance per se in jurisdictions that recognized this distinction. In contrast, for a nuisance in fact a plaintiff was required to show actual, not prospective, harm.

Courts also recognized several defenses to private nuisance causes of action. These defenses permitted nuisance-generating activities to

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at 1148. The California Supreme Court thought otherwise, and upheld plaintiff's injunction. Id.; see also Turner v. Big Lake Oil Co., 96 S.W.2d 221, 227–28 (Tex. 1936) (holding that strict liability for nuisance only applied to illegal activities).

See Mountain Copper Co. v. United States, 142 F. 625, 640–42 (9th Cir.), appeal dismissed, 212 U.S. 587 (1906) (denying U.S. injunction because loss to community of smelter outweighs damage to 'marginal' land). But see Indianapolis Water Co. v. American Strawboard Co., 57 F. 1000, 1004 (C.C. Ind. 1893) (arguing that granting company's right to pollute due to prominent economic role in community would allow taking of nuisance victim's property).

See Laflin and Rand Powder Co. v. Tearney, 21 N.E. 516, 517 (Ill. 1889) (holding powder magazines necessary to civilization, not nuisance per se, so plaintiff must plead and prove negligence). After remand, this case was again considered by the Illinois Supreme Court. Laflin and Rand Powder Co. v. Tearney, 23 N.E. 389 (Ill. 1890). This time, however, the court held that powder magazines were nuisance per se, and thus the owner should be held strictly liable for damages. Id. at 390–91. In dicta, the court notes that activities appropriate to unpopulated areas should give way as towns expand. Id. at 391. See also Turner, 96 S.W.2d at 222–23 (noting that sic utere doctrine unfair here, and that plaintiff must plead and prove negligence to recover); Bohan v. Port Jervis Gas Light Co., 25 N.E. 246 (N.Y. 1890) (holding that if activity lawful, plaintiff must plead and prove negligence to recover for nuisance). For another discussion of nuisance per se and nuisance in fact, see McFarlane v. City of Niagara Falls, 247 N.Y. 340 (1928).

See Gavigan v. Atlantic Refining Co., 40 A. 834, 835–36 (Pa. 1898) (verdict for $1,286 for illness due to odor from oil seepage); Hauck v. Tide Water Pipeline Co., 26 A. 644, 645–46 (Pa. 1898); Sullivan, 13 P. at 656–57 (verdict for $100 and injunction to compensate for smoke); Story, 4 Ohio St. 377–78 (verdict for $188.75 to compensate for illness and damages). To assist in comparison, $1,286 in 1898 dollars approximately equals $20,822 in 1987 dollars. One hundred dollars in 1887 approximately equals $1,290 in 1887. $188.75 in 1831 equals approximately $2,008 in 1987. See U.S. BUREAU OF LABOR STATISTICS, HISTORICAL STATISTICS, COLONIAL TIMES TO 1970 210–11 (Bicentennial ed. 1975).

See Bliss v. Washoe Copper Co., 186 F. 789 (9th Cir. 1911).

See Kurtz, supra note 11, at 688.
continue unabated. For example, courts allowed defendants to argue that state authorization for their activity, and the activity's public benefit, constituted a defense against nuisance actions.\(^{28}\) Defendants also asserted timeliness defenses such as laches\(^{29}\) and statute of limitations\(^{30}\) and reliance defenses such as estoppel.\(^{31}\) Furthermore, defendants could try to establish a prescriptive right to emissions.\(^{32}\) Finally, defendants could also plead contributory negligence.\(^{33}\)

In addition to private nuisance actions, plaintiffs used trespass to enjoin polluting activities. To prevail, plaintiffs would have to show a defendant's unlawful\(^{34}\) entry onto their land.\(^{35}\) Intent or negligence need not be shown to succeed at trespass, which made this action particularly appealing to plaintiffs injured by accidental emissions.\(^{36}\) Moreover, the statute of limitations for trespass ran longer in most jurisdictions which allowed plaintiffs extra time to detect and demon-

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\(^{28}\) See id. at 653 n.158–62 (citing cases in which defendants successfully pled authorization as defense against nuisance). A gas light company unsuccessfully tried this argument in *Bohan v. Port Jervis Gas Light*, 25 N.E. 246, 248–49 (N.Y. 1890). The court in this case noted that authorization only served as a defense to negligence if the defendant provided a public service, such as grading streets, and the ordinance expressly made an exemption from nuisance abatement. *Id.* For another unsuccessful attempt, see *New Jersey v. City of New York*, 283 U.S. 473 (1931).

\(^{29}\) The doctrine of laches holds that "equity aids the vigilant and not those who slumber on their rights." See *BLACK'S LAW DICTIONARY* 875 (6th ed. 1990). For citations to cases in which the defendant successfully pled laches, see Kurtz, *supra* note 11, at 634–35. The defendant unsuccessfully pled laches as a defense in *Woodruff v. North Bloomfield Gravel Mining Co.*, 18 F. 753, 795–98 (C.C.D. Cal. 1884) (holding laches defense inappropriate where lapse in time not due to plaintiffs' carelessness but due to procedural difficulties).

\(^{30}\) Different jurisdictions specify different length statutes of limitations, beyond which a plaintiff's claim is "too old" to be brought to court. Generally, the statute of limitations for nuisance was two years. See, e.g., *Martin v. Reynolds Metals Co.*, 342 P.2d 790, 791 (Or. 1959), cert. denied, 362 U.S. 918 (1960). In cases in which the statute of limitations was pled as a defense, often much fact-finding was dedicated to determining exactly when the statute should begin running. See Davis, *supra* note 18, at 760.

\(^{31}\) Estoppel prevents the plaintiff, because of his acts, from claiming a right to the detriment of another party. See *BLACK'S LAW DICTIONARY* 551 (6th ed. 1990).

\(^{32}\) Courts sometimes granted prescriptive rights to pollute if the nuisance was not also a public nuisance. See *Woodruff*, 18 F. at 788; Kurtz, *supra* note 11, at 634–35.

\(^{33}\) Some courts indicate that the plaintiff's contributory negligence would bar nuisance recovery even if negligence need not be proved to establish nuisance. See *McFarlane v. Niagara Falls*, 247 N.Y. 340, 349 (1928).

\(^{34}\) "Unlawful" is equivalent to "without excuse or justification." *BLACK'S LAW DICTIONARY* 1536 (6th ed. 1990).

\(^{35}\) For an example of a trespass case where the plaintiff fails to establish such entry, see *Carson v. Bromley*, 39 A. 1115 (Pa. 1898).

\(^{36}\) Similarly, the nuisance per se versus nuisance in fact distinction used in some jurisdictions had no effect in trespass cases. See *Wente v. Commonwealth Fuel Co.*, 83 N.E. 1049, 1051 (1908) (when physical invasion violates private rights, it is no defense that defendant went to great expense to clean emission or that activity was not nuisance per se).
strate injury. Because trespass requires a physical invasion, early cases applied a dimensional test to determine trespass or nuisance. Under this test, if the offending agent was visible, plaintiffs could plead trespass, if not, they pleaded nuisance. Later cases modified the dimensional test, and allowed plaintiffs to plead facts as trespass that before could be actionable only as nuisance.

A plaintiff suffering from pollution could also base an action against the defendant polluter for maintaining an abnormally dangerous activity. If the plaintiff could show the activity was abnormally dangerous, the defendant became strictly liable for the plaintiff's damages. The doctrine was first established in the famous English common law case Rylands v. Fletcher. States that adopted this as a separate doctrine usually consider whether the activity was common to its location, and whether the risks arising from it could be controlled by the exercise of proper care.

Plaintiffs could also seek punitive damages in limited situations. In early cases, courts granted these additional damages if a plaintiff repeatedly brought a defendant before a court for the same nuisance. To obtain punitive damages, a plaintiff must show that a defendant's acts were done willfully or knowingly. Courts awarded punitive damages as punishment, rather than compensation. This remedy, however, also allowed a plaintiff to use evidence that a defendant took subsequent pollution control measures that could have been taken earlier in order to prove the defendant had the requisite "knowing" state of mind.

37 See Martin, 342 P.2d at 791-94 (discussing longer statute of limitations for trespass and describing similarities and differences between nuisance and trespass).


39 See Martin, 342 P.2d at 796-97.


42 See Ellis v. American Academy of Music, 15 A. 494 (Pa. 1888) (holding the continued nuisance after judgment entitled plaintiff to punitive damages, no matter that plaintiff's additional damages de minimis); Long v. Trexler, 8 A. 620 (Pa. 1887) (noting punitive damages available when nuisance found by prior court).

43 Reynolds Metals Co. v. Lampert, 316 F.2d 272 (9th Cir. 1963) (allowing punitive damages for trespass by emissions from aluminum reduction plant).


45 McElwain v. Georgia Pacific Corp., 421 P.2d 957 (Or. 1966) (remanding to grant punitive
Courts applied special standards in some cases when a public agency acted as a party in a nuisance suit. A public agency could act as a plaintiff, suing for its damages under common law nuisance.\footnote{See Mountain Copper Co. v. United States, 142 F. 625 (9th Cir. 1906).} An agency could also declare an activity a nuisance under a local statute, in effect adding the activity to the list of actionable nuisances.\footnote{See Camfield v. United States, 167 U.S. 518 (1897); Stone v. Heath, 60 N.E. 975 (Mass. 1901) (holding that local board of health given power under statute to declare decaying pile nuisance).} An agency could also prosecute a polluter for a public nuisance using its police power.\footnote{See Georgia v. Tennessee Copper Co., 206 U.S. 230 (1907); RODGERS, supra note 41, at 102-04.} Finally, an agency could also be named as a defendant for causing a nuisance.\footnote{When plaintiffs named public agencies as defendants in nuisance actions, some courts expressed less willingness to require a public agency to pay damages, because ultimately the cost would be borne by the taxpayers rather than the wrongdoer. See East St. John Shingle Co. v. City of Portland, 246 P.2d 554, 563 (Or. 1952).}

When a public agency acted as a plaintiff in a nuisance action, generally the same analysis applied as between private parties.\footnote{See Lind v. City of San Luis Obispo, 42 P. 437, 438 (Cal. 1895).} If a public agency proceeded to abate a nuisance using its police power, courts often stepped in. In some jurisdictions, courts would only allow local governments to declare activities a nuisance if the activities...
would be considered a nuisance per se under the common law. Thus, a public agency that declared a nuisance under a statute or ordinance ran the risk that a common law court would find no nuisance, and the agency would need to reimburse the defendant for abatement costs.

In summary, the substantive result from bringing a common law action to remedy harm from pollution seems quite varied. Nevertheless, one can generalize about the tools available to injured plaintiffs to obtain damages and relief. If a plaintiff sustained injury or was vulnerable to probable future harm, he could sue the nuisance-generating party for damages or an injunction. The nature of the injury dictated the cause of action a plaintiff could pursue. For a nuisance claim, first a plaintiff needed to show that the defendant's activities interfered with his use or enjoyment of land. Second, the plaintiff was required to show that the defendant's activities caused this injury.

The plaintiff's job became easier when the activity was prohibited by statute, or fit the jurisdiction's definition of a nuisance per se. In these instances, a plaintiff met his burden of establishing a nuisance by stating facts that fit the jurisdiction's statutory or common law standards. Even against a nuisance per se or an unlawful activity, a plaintiff was still obliged to demonstrate substantial injury in order to recover damages, and demonstrate that the activity would continue to do him harm in order to obtain an injunction. In response, a defendant could raise a number of defenses. Ultimately, the trial judge

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51 See City of Denver v. Mullen, 3 P. 693, 698-700 (Colo. 1884) (holding that city could not fill up ditch as nuisance abatement because ditch not nuisance per se under common law). But see Hadachek v. Sebastian, 239 U.S. 394, 410-11 (1915) (holding that city could declare brick kiln nuisance even though not considered nuisance per se at common law).

52 Stone v. Heath, 60 N.E. 975, 976 (Mass. 1901). In addition, when a local agency acted to abate a public nuisance, courts showed greater willingness to award equitable remedies than they would for a private party, because government acts in its sovereign capacity to right public wrongs, rather as a private owner. See New Jersey v. City of New York, 283 U.S. 473, 482-83 (1931); Georgia v. Tennessee Copper Co., 206 U.S. 230, 237 (1907). The concurring opinion in Georgia v. Tennessee Copper, however, argued that states and private parties should be treated alike. See id. at 239 (Harlan, J., concurring).

53 For an attempt to organize and explain nuisance law in terms of competing property rights models, see Bone, supra note 18, at 1101.

54 The ability to demonstrate injury could change over time as technology improved. See Missouri v. Illinois, 200 U.S. 496, 522-23 (1906) (noting that this nuisance action may have failed in past because technology not advanced enough to detect typhoid).

55 Horwitz discusses the causation requirement as a way to justify compensating an injured party without being accused of redistribution. See Horwitz, supra note 11, at 52-53. However, the causation requirement also provides a nexus between nuisance-generating behavior and compensation, thus providing a deterrent to defendants and potential defendants.

56 See supra note 47 and accompanying text.

57 For example, in jurisdictions that required the plaintiff to establish negligence, the defendant could raise contributory negligence as a defense. The defendant could also argue that the
would apply this varied and flexible body of nuisance precedents to determine each case.

B. Developments in Common Law Nuisance

Modern common law cases exhibit several different characteristics from the turn-of-the-century cases outlined above. The American Law Institute's release of the Restatement of Torts prompted some courts to use the Restatement's negligence rules to determine liability in common law cases. Courts also weakened the procedural barriers to holding multiple defendants jointly and severally liable for a plaintiff's damages. In addition, courts became more inventive about the relief granted to successful plaintiffs.\(^{58}\)

Nuisance law became more uniform with the release of the Restatement of Torts. The Restatement's rule for nuisance instructed that to recover for a private nuisance a plaintiff must show a substantial invasion of his use or enjoyment of his land, and must show either that the invasion was intentional and unreasonable, or that the defendant was negligent.\(^{59}\) Many courts adopted the Restatement's nuisance rule.\(^{60}\) Often these nuisance cases were decided in favor of the

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\(^{59}\) See RESTATEMENT OF TORTS § 822 (1939), quoted in Patterson v. Peabody Coal, 122 N.E.2d 48, 51 (Ill. App. 1954). One commentator notes that the Restatement test demonstrates a radical departure from the common law tests in use at the time. See Lewin, supra note 11, at 210–11. Lewin observes that American nuisance law was grounded in natural rights theory and sought to preserve property rights against interference. The Restatement, in contrast, provided a positivist test that balanced the utilitarian value of competing activities. Id.

The Restatement's departure from tradition and actual common law practice was noted by one commentator during the discussions surrounding the Restatement's revision. See Lewin, supra note 11, at 222. Lewin quotes Fleming James, Jr., one of the Advisors to the Restatement (Second). James stated that the balance of utilities test failed to explain the large number of cases that imposed liability without fault in "situations where the invasion of plaintiff's interest is so substantial that he should not be compelled to suffer it without compensation even though defendant's conduct entails no fault and is not abnormally dangerous." Id.

\(^{60}\) See Nelson v. C&C Plywood Corp., 465 P.2d 314, 318 (Mont. 1970) (citing Restatement and Pennsylvania cases that apply Restatement, to determine Montana nuisance law); Fuchs v. Curran Carbonizing and Engineering Co., 279 S.W.2d 211 (Mo. Ct. App. 1955) (remanding for new trial because jury not instructed to take Restatement's elements into account to determine reasonableness); Patterson, 122 N.E.2d at 51; Morgan v. High Penn Oil Co. 77 S.E.2d 682, 689 (N.C. 1953) (reversing for new trial because trial court "improperly" set forth elements of nuisance). Morgan was followed in Wright v. Masonite Corp., 368 F.2d 661 (4th Cir. 1966), a diversity case that applied, North Carolina law, and found no nuisance. However, the dissent in
defendant, because the plaintiff, following older common law, had failed to plead and prove negligence at trial, and had not established defendant's unreasonable or intentional conduct. To add to the plaintiff's difficulties, courts differed on what constituted unreasonable conduct. Some courts found that unreasonable conduct required a cost/benefit analysis, while other courts inquired whether the plaintiff had experienced substantial harm. Still other courts claimed to use the Restatement test, but applied it to match jurisdictional precedent.

Modern common law cases also expanded the plaintiff's ability to hold several parties joint and severally liable for his injury. Early cases required that multiple defendants act jointly for the court to hold each jointly and severally liable. More recent cases allow joint and several liability if the plaintiff suffered harm caused by several defendants that could not be assigned among these defendants.

Modern judges also demonstrate greater inventiveness when structuring remedies for successful plaintiffs. Accordingly, courts attempt to compensate damaged plaintiffs without compelling nuisance-generating businesses to shut down. In one famous case, Boomer v. Atlantic Cement, the courts essentially ordered the plaintiff to sell the defendant a pollution servitude to his land, for a price in permanent damages set by the court.

Wright argued that North Carolina law differed from the Restatement, and properly applied, the law would find a nuisance. Id. at 666.

See Patterson, 122 N.E.2d at 51–53 (reversing $5,000 damage award and holding nuisance from burning gob piles is not recoverable because spontaneous combustion is not intentional and because plaintiff did not prove negligence).

Fuchs, 279 S.W.2d at 218; Patterson, 122 N.E.2d at 51–52.

Morgan, 77 S.E.2d at 689. Sections 826(b) and 829A of the Restatement (Second) of Torts expressly allow this, by imposing liability if the harm to the plaintiff is unreasonable in that it is sufficiently serious to warrant compensation. See Lewin, supra note 11, at 228.

See Associated Metals v. Dixon Chemical, 197 A.2d 569 (N.J. Super. Ct. App. Div. 1963) (interpreting New Jersey common law to hold that any nuisance via airborne particles is nuisance per se and finding that this case contained intentional and unreasonable conduct, which constitutes nuisance under the Restatement).

Early cases required that the plaintiff prove the defendants acted jointly in order for the plaintiff to hold them to joint and several liability. See, e.g., Hileman v. Hileman Distilling Co., 33 A. 575 (Pa. 1896); Gallagher v. Kemmerer, 22 A. 970, 971 (Pa. 1891).

Mitchie v. Great Lakes Steel, 495 F.2d 213 (6th Cir. 1974) (analogizing to auto negligence cases to change rule for plaintiffs seeking damages for pollution).

Boomer v. Atlantic Cement Co., 257 N.E.2d 870 (N.Y. 1970) (awarding auto-junkyard owner permanent damages for nuisance caused by cement company). On remand, the court awarded plaintiffs $710,737.56, about four times the permanent damages set by the trial court in the initial trial. Lewin, supra note 11, at 218.

Several common law characteristics become apparent from this review. First, courts have applied a variety of different rules to determine liability in pollution cases. This variety indicates that courts often use case-by-case judgment rather than rule-bound analysis. The common law history also shows that courts are skilled at adapting rules to new situations, and altering pleading requirements and remedies to accommodate perceived shortcomings. The first-year law student is often told that the United States contains fifty common law laboratories. In no area is this more apparent than in the pollution remedies provided by the common law.

C. Reform and Regulation

As public awareness of pollution increased, calls for systematic statutory regulation of polluting activities grew. Some believed that private nuisance actions were inadequate to prevent pollution and compensating for pollution harm. These common law critics argued that informational, procedural, and financial barriers precluded many affected parties from bringing suit, and that the judiciary's lack of expertise when assessing technological issues yielded poor results. The common law proceeded case-by-case and relied on experience. Based on tradition, it produced conservative results, and, some argued, failed to keep pace with changing society. With the enactment of the Clean Air Act, the Clean Water Act, and the Resources Conservation and Recovery Act, most polluting activities became regulated by detailed federal statutes. Still, injured plaintiffs found themselves in court to obtain compensation for

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68 See Lewin, supra note 11, at 229 (describing criticisms of private nuisance).
69 Boomer, 257 N.E.2d at 871.
70 These observations are explained further in Wienczyslaw J. Wagner, Codification of Law in Europe and the Codification Movement in the Middle of the Nineteenth Century in the United States, 2 ST. LOUIS U. L.J. 335, 335-39 (1953).
personal pollution damage, using common law causes of action when regulatory remedies failed them.\(^75\)

One area in which the law shifted from common law remedies to regulatory enforcement is USTs. Courts have considered oil leakage complaints for decades.\(^76\) Early cases show the variety of ways common law courts applied nuisance law to cases complaining of damage from leaking oil containers.\(^77\) Newer cases depict the growth of modern common law treatment of joint and several liability,\(^78\) and display the Restatement of Torts’ effect on common law trespass and nuisance.\(^79\) Oil leakage is also an area where injured plaintiffs continue to seek compensation for injury, although this area is subject to pervasive regulation.\(^80\) Thus, analysis of this specific area of private and public pollution law should provide meaningful observations for other areas of pollution law.

\(^{75}\) These regulations do not automatically preempt application of private nuisance law. Emissions, if unreasonable, may still be a private nuisance although allowed by statute. See Lewin, \textit{supra} note 11, at 230 n.221.

\(^{76}\) Plaintiffs brought these suits often, because gasoline in water is detectable by human taste at levels as low as one part per million, a level well below toxicity. See Geoffrey Commons, Note, \textit{Plugging the Leak in Underground Storage Tanks: The 1984 RCRA Amendments}, 11 \textit{VT. L. REV.} 267, 269 (1986).

\(^{77}\) See Jackson v. United States Pipe Line Co., 191 A. 165 (Pa. 1937) (holding defendant strictly liable under statute for oil leak into neighbor’s well); Turner v. Big Lake Oil Co., 96 S.W.2d 221 (Tex. 1936) (holding that plaintiff must prove negligence to recover for nuisance caused by oil-polluted salt water flowing from defendant’s land to plaintiffs’); Shelly v. Ozark Pipe Line Corp., 37 S.W.2d. 518 (Mo. 1931) (holding that plaintiff cannot be compensated for speculative future damages, monetary damages for past harm is appropriate remedy for temporary nuisance); Gavigan v. Atlantic Refining Co., 40 A. 834 (Pa. 1898) (holding in suit for damages for injury from oil seepage that although business not nuisance per se, because it created public as well as private nuisance, plaintiff could recover without proving negligence); Hauck v. Tide Water Pipe-line Co., 26 A. 644 (Pa. 1898) (holding defendant strictly liable for damages from oil escaping his land, because oil not necessary to development of land, brought from distance).

\(^{78}\) See Landers v. East Texas Salt Water Disposal Co., 248 S.W.2d 731 (Tex. 1952) (allowing plaintiff to hold multiple tortfeasors jointly and severally liable for pollution of lake from oil pipelines without showing unity of purpose or share of injury attributable to each).

\(^{79}\) Commons, \textit{supra} note 76, at 274 (discussing oil leakage cases under common law rules as articulated in Restatement of Torts). The Restatement requires that a plaintiff prove that the defendant was negligent or intentionally allowed the nuisance or intended the trespass in order to recover. \textit{Id.}; Moore v. Mobil Oil Co., 480 A.2d 1012 (Pa. Super. 1984).

However, plaintiffs did succeed in some actions in establishing that underground gasoline storage was an abnormally dangerous activity. See City of Northglenn v. Chevron, 519 F. Supp. 515 (D. Colo. 1981); Yommer v. McKenzie, 257 A.2d 138 (Md. 1969); Commons, \textit{supra} note 76, at 279.

\(^{80}\) See Wilson v. McLeod Oil Co., 396 S.E.2d 586 (N.C. 1990); Kulpa v. Stewart’s Ice Cream, 144 A.D.2d 205 (N.Y.S. 1988) (holding leaking tank owner can be liable under private nuisance theory, but requiring mental element for trespass); Moore v. Mobile Oil Co., 480 A.2d 1012 (Pa. Super. 1984) (remanding for damages a trial award of permanent injunction against service station with leaking tanks, ordering cleanup of contamination and supply of potable water to plaintiffs).
III. Statutes and Regulations Governing Leaking Underground Storage Tanks (LUSTs)\(^{81}\)

Underground storage tanks, typically installed to contain fuel at filling stations and fleet lots, came under the federal government's regulatory ambit in 1984.\(^{82}\) Congress passed subchapter IX (now subtitle I) of the Resource Conservation and Recovery Act (RCRA) to address the widespread environmental problem posed by the leaking of petroleum fuels from these tanks into the groundwater.\(^{83}\) This section provides an overview of UST technology, regulation, and enforcement. First, this section briefly considers the technological challenges presented by underground fuel tanks. A review of the legislative and political history of these amendments follows. Third, this section examines the LUST statutory and regulatory text. Finally, to better describe the program's current problems, this section discusses legal and economic developments since the passage of the UST regulations.

A. A Brief Discussion of UST Technology

Owners place USTs underground for safety reasons, because above ground tanks present a greater fire hazard.\(^{84}\) Underground storage also saves owners space, and thus money. A tank system includes the tank, pumps, and pipes necessary for filling and removing product, and for venting the tank. Pumps are placed either inside the tank,

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\(^{81}\) The acronym for the program was originally LUST, but was changed to RUST (regulation of underground storage tanks), and then ultimately to UST in an effort to avoid negative connotations. Nevertheless, the Office of Underground Storage Tanks is still OUST. See Katherine S. Yagerman, Underground Storage Tanks: the Federal Program Matures, 21 ENV. L. REP. 10,136 (1991).

\(^{82}\) Petroleum was specifically excluded from the definition of a hazardous substance in CERCLA. 42 U.S.C. § 9601(14) (1988). This exclusion applied to gasoline even though additives in gasoline were listed as hazardous substances in CERCLA. Wilshire Westwood Assoc. v. Atlantic Richfield Corp., 881 F.2d 801 (9th Cir. 1989).

\(^{83}\) 42 U.S.C. §§ 6991-6991i (1988). See Glenn Waddell, A Practitioner's Guide to the Recently Promulgated UST Regulations, 41 ALA. L. REV. 487, 487 (1990). Structural failure of a tank may cause a leak, but leaks are primarily a result of corrosion. Id. The regulations regulate petroleum fuels, as well as CERCLA listed hazardous substances, but exclude hazardous wastes as defined in RCRA. See 42 U.S.C. § 6991(2). The goal of this regulation is to protect groundwater from contamination. Yagerman, supra note 81, at 10,137–38.

\(^{84}\) See Stephen M. Testa & Duane L. Winegardner, Restoration of Petroleum-Contaminated Aquifers 7–8 (1991). About 97% of these tanks contain petroleum. Id. at 8.
which places the gasoline under pressure and pushes it out of the tank, or on the outside dispensing equipment, which creates suction that pulls the gasoline out of the tank.

Tanks generally leak due to corrosion. Tanks may corrode from the outside because the soil acts as an electrolyte, causing the steel to break down. Tanks may also corrode from the inside because water, oxygen, or bacteria have gathered inside the tank. Operators may also cause leaks by repeatedly bumping the bottom of a tank with a gauging stick. In addition, methanol blended in gasoline may soften tank lining and cause hoses and pipes to fail.

An unprotected steel tank begins leaking when it is 10 to 20 years old, according to EPA estimates. On the other hand, fiberglass tanks or steel tanks coated with corrosion resistant material rarely leak. Tanks can be retrofitted with interior linings, or protected by cathodic devices that divert the low-level corrosion-causing electrical charge generated in the ground to another piece of metal. Double-walled tanks keep leaking gasoline from contaminating the soil and groundwater, but are expensive.

Once leaked, gasoline is difficult to clean from the soil and groundwater. Clean-up methods for dissolved hydrocarbons include air

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85 A pressurized system will push gasoline out the breach and may leak a large quantity before the operator detects the leak. See Yagerman, supra note 81, at 10,137; TODD G. SCHWENDEMAN & H. KENDELL WILCOX, UNDERGROUND STORAGE SYSTEMS: LEAK DETECTION AND MONITORING 13–14 (1987).

86 With a suction system, if the tank's pipes leak, the system pulls air into the fuel line and gasoline falls back into the tank. A suction system will thus warn the operator of a leak and cause less damage. Suction pumps only work well in low-volume systems with few dispensers. See Yagerman, supra note 81, at 10,137; SCHWENDEMAN & WILCOX, supra note 85, at 13–14.

87 John H. Fitzgerald, Corrosion of Underground Storage Tanks . . . Causes and Cures, PLANT ENGINEERING, July 21, 1983, at 46. To discourage this corrosion, tanks are surrounded by a non-corrosive, clean material known as backfill. Yagerman, supra note 81, at 10,137.

88 See Fitzgerald, supra note 87, at 46.

89 Id.

90 See J. Richard Shaner, How Mixes Can Ruin Your Equipment, NATIONAL PETROLEUM NEWS, Aug. 1983, at 41. In general, piping leaks twice as often as tanks. See Yagerman, supra note 81, at 10,137; TESTA & WINEGARDNER, supra note 84, at 8.

91 See Yagerman, supra note 81, at 10,137. Over 75% of existing systems are made of unprotected steel. TESTA & WINEGARDNER, supra note 84, at 8.

92 Yagerman, supra note 81, at 10,137.

93 Id.

94 See DAVID C. NOONAN & JAMES T. CURTIS, GROUNDWATER REMEDIATION AND PETROLEUM: A GUIDE FOR UNDERGROUND STORAGE TANKS (1990) (describing technological requirements for cleaning gasoline from soil, groundwater). Once gasoline leaks from a tank it is difficult to clean. See Commons, supra note 76, at 270 n.29. Gasoline floats on water and coats rock at the top of an aquifer. Id. Only 40–60% of this gasoline can be removed by pumping. Also, groundwater moves slowly. Id. at 270 n.30. Since leaks are only usually detected when the
stripping, carbon adsorption systems, biorestoration, reverse osmosis, ozonation, oxidation with hydrogen peroxide, and ultraviolet irradiation.\textsuperscript{96} Of these, air stripping and activated carbon adsorption are the most popular and cost-effective methods.\textsuperscript{96} Air stripping, however, releases volatile compounds into the air, and may therefore pollute the air.\textsuperscript{97} Because removing gasoline from soil and water is very difficult, UST regulations sought to prevent leaks.

\textbf{B. History of RCRA Subtitle I}

Groundwater contamination from leaking underground tanks began receiving discrete attention in the early 1980s.\textsuperscript{98} Tanks installed during the 1950s and 1960s boom in gas station construction were corroding and leaking their contents into the groundwater.\textsuperscript{99} At a contamination reaches another person's water supply, the groundwater may contain large amounts of gasoline before the leak is detected. \textit{Id.}


\textsuperscript{96} \textit{Noonan} \& \textit{Curtis}, supra note 94, at 5. Generally air stripping is more cost-effective than carbon adsorption. \textit{Id.} at 59.

\textsuperscript{97} \textit{Id.} at 38. The capital costs for an air stripping tower range from $27,000 to $1,100,000, but can be much higher if air pollution control equipment must also be attached. \textit{Id.} at 30.

\textsuperscript{98} \textit{See} Timothy R. Henderson \textit{et al.}, \textit{Groundwater: Strategies for State Action} 14–15 (Envtl. L. Inst. pub. 1984). This attention began because tanks were beginning to leak. Also, Congress in 1983 funded a five-year study from the USGS to study groundwater contamination. \textit{See id.} at 46–47. Data on chemicals in groundwater and their dispersion had thus become available. \textit{Id.}

In 1984 an estimated 1.7 million petroleum tanks were buried nationwide. \textit{See} David C. Scott, \textit{Plugging Leaks in Underground Gas Tanks}, \textit{Christian Sci. Monitor}, May 9, 1984, at 7. About 35% of these are owned by major oil companies. \textit{Id.}

As of mid-1992, an estimated 166,000 tanks were known to be leaking. Ruth Gastel, \textit{Environmental Pollution: Insurance Issues}, \textit{Ins. Info. Inst. Rep.} (Dec. 1993). The total number of tanks is about 1.8 million at about 750,000 locations. \textit{Id.}

Senate hearing held in late 1983, Jack E. Ravan, Assistant EPA Administrator for Water, estimated that 75,000 to 100,000 tanks were leaking 11 million gallons of gasoline annually into groundwater. Additionally, the Congressional Research Service in 1983 had reported that public wells were closed in a number of southeastern cities due to contaminated groundwater. About half the population in the United States depends on groundwater for drinking purposes, so these leaks raised concerns in Congress. Municipalities in several areas had successfully sued tank owners to pay for oil seepage clean-ups. However, difficulties in finding owners with sufficient funds to pay for expensive measures, and concern for under-enforcement coupled with legal time delays created additional pressure for a regulatory solution.

EPA sought to respond by proposing that these tanks be regulated under an amended Toxic Substances Control Act (TSCA). Senator

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101 See Lawrence Mosher, Polluted Groundwater Clearly a Problem, but Few Agree on Extent or Solution, NAT'L J., Feb. 4, 1984, at 223. Many of these wells were contaminated with substances other than petroleum, for example, EDB, and trichlorethylene, and chemicals from deep injection hazardous waste disposal. Id.

102 Miller & Taylor, supra note 100, at 10,136.

103 See Commons, supra note 76, at 283–84. Commons argues that because the common law only resolves disputes between individuals, and requires showing particularized and substantial damages, societal injuries were not fully compensated. Id. at 283.

104 See Scott, supra note 98, at 7 (citing Provincetown, Massachusetts, Richmond, Rhode Island suits); diNardo, supra note 99, at 4 (describing Provincetown suit, noting that 3,000 gallon leak discovered in 1977, jury trial expected to begin in mid-1984).

Even so, individuals also sued and prevailed against leaky tank owners. See Leslie Anderson, Regional News (Conn., Me., Mass., N.H., R.I., Vt.), UPI, May 13, 1984 (describing suit by Carosellis and neighbors against local gas station for contaminating wells, verdict of $545,000 for seven families, case on appeal at time of interview); Regional News (Cal.), UPI, May 16, 1983 (reporting that 266 plaintiffs sued Fairchild Camera and Instrument Corp. in Silicon Valley, for contaminating water with 1,1,1-trichloroethane stored in underground tank). In New York, the state Supreme Court found Sun Oil strictly liable under the state's Navigation Law for damages to ten families caused by gasoline that leaked from a company-owned gasoline station's underground tanks. A trial was held to determine damages, although Sun Oil had paid four families forced to move settlement totalling $750,000. Plaintiffs sought the full value of their Long Island homes because fumes from the leak made them unsalable. See Regional News (N.Y. Metro), UPI, May 25, 1983.

105 See Draft EPA Strategy Would Control Groundwater, BNA DAILY REPORT FOR EXECUTIVES, Jan. 6, 1984, at A–4, available in LEXIS, Nexis Library, BNA File. The EPA estimated that about 75,000 to 100,000 underground tanks were then leaking. Id. The EPA expected that
David Durenberger proposed amendments to RCRA in February, 1984 in his bill, S. 2513. This bill required inventory, registration and inspection of underground storage tanks and federal design standards for new tanks, as well as providing funds for remediation. Supporters of a statutory solution argued that regulation was required because a small amount of gasoline can contaminate a large amount of water. Also, leaks were not usually discovered until a large amount of petroleum had already leaked into the groundwater. Actually cleaning a contaminated site was often not feasible, so regulatory proponents sought to prevent leaks. Therefore, regulatory propo-

about one million tanks would leak, because they were over 16 years old and unprotected. Id. David Lennett of the Environmental Defense Fund commented that amending the TSCA and promulgating regulations for underground tanks would take about eight years. Id.

As 1984 progressed the estimates of leakage rose. EPA estimated in May that of the 1.4 million tanks nationally, 25% to 30% were leaking. See Anderson, supra note 104 (quoting Paul Keough, deputy regional administrator for the EPA in Boston). In July, the Office of Toxic Substances Director Don Clay estimated that 25% of the over two million tanks nationally “may be leaking.” Regulatory Strategy for Underground Tanks May Require Daily Testing, EPA Official Says, BNA DAILY REPORT FOR EXECUTIVES, July 13, 1984, at A-1 available in LEXIS, Nexis Library, BNA File. Some industry representatives claimed these statistics were far too pessimistic, and that only one to two percent of the 1.4 million tanks nationally leaked. See J. Richard Shaner, Underground Tank Dilemma, 76 NAT'L PETROLEUM NEWS 36 (Aug. 1984).

106 See Durenberger Plan for Underground Tanks Needs Tightening, BNA DAILY REPORT FOR EXECUTIVES, Mar. 2, 1984, at A-20, available in LEXIS, Nexis Library, BNA File. Durenberger sought to amend RCRA because it would be enacted that year. Id. Environmentalists preferred a straight RCRA amendment because the hazardous waste office of the EPA would be responsible for promulgating regulations, and they “were a better part of the EPA.” Id. (quoting Leslie Duch of the National Audubon Society). As predicted, the RCRA reauthorization succeeded in 1984, while the Superfund amendment failed. See Joseph A. Davis, RCRA Rewrite Strengthens Hazardous Waste Protections, CONGO, Oct. 6, 1984, at 2453. Congressman James Florio proposed a rider in the House of Representatives that also proposed a “superfund” to clean up leaks from underground tanks and set specifications for underground tank regulation. See Shaner, supra note 105. Both bills contained similar provisions, including tank registration, leak detection devices and testing of all tanks, required reporting of leaks, and a $25,000 penalty for noncompliance. The Florio bill had the strong support of House Speaker Tip O'Neill, who demanded a bill before the Presidential elections. Id.

107 Id.

108 Deputy EPA Administrator Paul Keough said that one gallon of gasoline would contaminate up to 750,000 gallons of water. See March, supra note 99.

109 Id.; Notes from the Underground: Mass. Tanks Found Leaking, PLATT'S OILGRAM NEWS, Apr. 5, 1983, at 4 (quoting Massachusetts PIRG study that found 40% of tank owners not checking daily for leaks).

110 See U.S. EPA, A DRAFT GROUND-WATER PROTECTION STRATEGY FOR THE ENVIRONMENTAL PROTECTION AGENCY (Jan. 1984). Monitoring and remedying tank leaks was an expensive task for tank owners. One industry analyst estimated that a new tank cost between $5,000 and $10,000 in 1984, monitoring about $2,000 per system, and testing about $500 per tank. diNardo, supra note 99, at 4 (quoting Steffan Pleha, consultant with Fred C. Hart Assoc. in Washington, D.C.). Exxon noted that in its tank replacement program between 1979 and 1983, it spent between $30,000 and $70,000 per location for tank replacements and $30,000 per location
ments on the one hand doubted that leaks would be prevented by individual initiative, yet on the other hand wanted to develop a system that would address the problem without engendering industry opposition.

Meanwhile, state legislatures were already pursuing various programs to regulate underground storage tanks. Some oil marketers complained about further regulation, but also noted that standardized federal laws would provide consistent national standards and preempt the emerging patchwork of state law. Other oil industry representatives argued that the industry could handle the leaking UST problem without additional regulation. These representatives claimed that marketers carried liability insurance for "the worst possible tank

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for lining replacements. See Shaner, supra note 105. Mobil estimated its tank replacements cost about $27,000 per station, ARCO said its costs per station were between $50,000 and $60,000.

111 See, e.g., FLA. STAT. ANN. §§ 376.30-376.317 (West 1985); Scott, supra note 98, at 7 (describing Rhode Island's regulations, which included requiring double-walled steel tanks with sensors in the walls to detect leakage). Rhode Island officials drafted these regulations after gasoline contaminated a trailer park's water supply. See Anderson, supra note 104.

Tank regulations were also proposed in Connecticut, Maine, California, Florida and Massachusetts in 1984. See id.; diNardo, supra note 99, at 4. By July of 1984, 32 states had or were in the process of considering legislation to regulate leaking tanks. See Regulatory Strategy, supra note 105, at A–1 (quoting Heather Wicke, counsel for the Senate Environment and Public Works Committee).

Between the passage of subtitle I in 1984 and the EPA's regulations in 1988, many states had passed their own UST regulations. These regulations exhibited a variety of approaches to the leaking UST problem. Some states implemented stringent release detection, while others required state-of-the-art leak prevention for new USTs. See 53 Fed. Reg. 37081 at 37215 (to be codified at 40 C.F.R. § 280). Some states tailored their regulations to whether the UST was near vulnerable groundwater. Id. Maine and South Carolina assessed groundwater vulnerability when setting UST standards. EPA justified their reliance on state enforcement in part by noting that many states already had programs. Id.

112 Many marketers preferred federal action, albeit early, so that tank regulations would be consistent. See Shaner, supra note 105, at 53. EPA, however, adopted regulations that allow for a variety of local regulatory approaches, so industry ultimately must cope with a variety of regulations.

EPA retains the right to begin an enforcement action against any enterprise. Thus state enforcement discretion only lasts as long as the EPA agrees with its enforcement strategy. The EPA is required to notify the state before issuing an order or starting a civil action. See 42 U.S.C. § 6991e(a)(2) (1988). EPA noted in 1990 that it planned to initiate enforcement action only against state-referrals of violations, and did not intend to check independently on compliance. See Implementation of the Underground Storage Tank Program: Hearing on S. 1560 Before the Subcomm. on Environmental Protection of the Comm. on Environment and Public Works, 101 Cong., 2d Sess. 5–6 (1990) (statement of Senator Durenberger) [hereinafter S. 1560 Hearings]; id. at 32 (testimony of Peter F. Guerrero, GAO); id. at 51 (testimony of Lois Epstein, Environmental Defense Fund) (arguing that EPA enforcement of financial responsibility lax, enforcement of technical standards left to states because state rules stricter than "lax" federal standards). Only states with EPA approved programs have enforcement authority. Wyoming provides a vivid example of a state-administered program that is much more aggressive than the EPA would be. See S. 1560 Hearings, supra, at 27 (statement of Don Clay, EPA).
Industry trade groups also provided testing expertise and advice for owners of leaky tanks. They argued that these procedures provided cost-effective protection of groundwater, unlike some of the techniques sought by regulators. EPA, acting under existing statutory authority, announced its own plan to address the UST problem. EPA said it would implement a national field survey to determine the extent of the leaking UST problem. EPA would also distribute a chemical advisory to tank owners on how to avoid, detect, and repair a leak, and would also publish a notice of proposed rulemaking to regulate underground tanks nationally under authority provided in RCRA. Despite EPA's independent efforts, Senator Durenberger's amendment to RCRA
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passed the Senate by a vote of 93–0 on July 26, 1984. The final package was contained in a House bill, and passed November 3, 1984.118

The UST statutes in subtitle I of RCRA represent a large and comprehensive regulatory program that sets standards for states to implement under EPA review.119 The Federal Clean Water Act required about 50,000–75,000 entities to obtain permits in 1984. By contrast, at the time the RCRA amendments passed, an estimated 2 million tank owners came under regulation.120 Many of these owners were too small to have much prior contact with environmental regulation.121 Rather than assess whether the problem of leaking USTs required a more limited federal program,122 or perhaps local or industry regulation, Congress decided to pass a comprehensive program to regulate tanks from cradle to grave.123

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119 See Miller & Taylor, supra note 100, at 10,137–38. At least one commentator suggests that this level of detail was a result of Congressional mistrust of the Reagan Administration's EPA. See James A. Rogers & Dorothy A. Darrah, RCRA Amendments Indicate Hill Distrust of EPA, LEGAL TIMES, Nov. 19, 1984, at 28. By providing considerable direction in the bill, Congress prevented the EPA from exercising flexibility in its UST regulation. Id. This article notes that the amendments required numerous reports and new regulations, all under ambitious deadlines, and forecast that this would lead to hastily crafted regulations. Id.
120 Miller & Taylor, supra note 100, at 10,138.
121 Id. at 10,139.
122 Id. at 10,143. For example, if the UST leakage was primarily due to faulty installation and aging, then the EPA could set a useful life for tanks, establish installation standards and monitor old tanks. Id. Alternatively, the EPA could have focused on the harm done to groundwater for all manner of discharge, rather than constructing regulation for specific activities such as USTs. See Lawrence Ng, A DRASTIC Approach to Controlling Groundwater Pollution, 98 YALE L.J. 773, 786–791 (1988–89) (arguing that effective national groundwater protection should rely on effluent charges).
123 By favoring comprehensive regulation, EPA must also cull sufficient funds to implement this program. Although EPA requested $23.5 million for UST and $96.3 million for the LUST Trust Fund for 1994, the Clinton Administration has requested only $16 million for UST and $75.4 million for LUST. These figures are still above the actual budget for these programs in 1993 ($15.9 million for UST, $75 million for LUST). See EPA Ground Water Plan for States Will Not Succeed, Think Tank Says, GROUND WATER MONITOR, June 3, 1993, at 6 (reporting study released by Center for Resource Economics, calling for increase in EPA funding).

With budget constraints, perhaps the UST program will pursue inexpensive and innovative ways to prevent UST discharge. See, e.g., Cryogenics Offers Cheap Way to Contain Hazardous Wastes, GROUND WATER MONITOR, June 3, 1993 (discussing freezing ground around discharge to contain effluent until remediation methods improve); Gastel, supra note 98 (recommending that instead of cleanup, contaminated land and groundwater should be restricted from use, reducing costs by 35%).

The entire program's cost, however, would also include state budgeting for UST programs, as the EPA depends on state programs to enforce these rules. Certainly a total understanding of the cost of these regulations would also include costs borne by private individuals to comply with corrective actions and financial responsibility requirements. In 1991, the EPA estimated...
EPA published the final version of UST regulations under RCRA in 1988. Between the passage of the RCRA amendments and the regulatory effective date, an interim prohibition forbid the installation of any tank, unless the tank met certain specifications. These requirements resemble the regulatory standards, so this interim prohibition automatically "promulgated" national tank standards.

Critics of the UST program argued that the UST regulations would run small gasoline station operators out of business, by requiring them to purchase expensive insurance policies and make large capital improvements. Because the UST regulations differ from state to state, large interstate operators must comply with a variety of different restrictions. Large companies thus do not realize the competitive advantage over smaller companies that is provided in centralized regulation. The regulations, however, provide an opportunity for enterprises involved in UST manufacture and repair to manipulate regulatory requirements to suit business ends. For example, state
regulations often provide a list of approved contractors to perform UST remediation.\textsuperscript{129}

\textbf{C. Text of RCRA Subtitle I}

The RCRA amendments regarding USTs provide comprehensive direction for EPA's regulation of USTs. They define a UST as a tank with 10 percent or more of its volume, including piping, beneath the surface.\textsuperscript{130} They also list which tanks must comply with the UST requirements.\textsuperscript{131} Furthermore, system owners must notify state authorities of their UST. Additionally, new tanks must meet standards of design, construction and installation. For example, USTs must be equipped with leak-detection devices, and any leaks must be reported following certain standards. The statute also directs EPA to set standards for leak cleanups and tank closures. The statute also provides EPA with authority to issue administrative orders or pursue federal civil actions to enforce the UST statutes.\textsuperscript{132}

The EPA has promulgated extensive regulations under these statutes.\textsuperscript{133} These regulations set forth procedures for operating UST systems, monitoring tanks,\textsuperscript{134} and reporting leaks.\textsuperscript{135} They specify what materials are acceptable for new USTs.\textsuperscript{136} These regulations

\textsuperscript{129} See Storage Tank Law May Change, CRAINS DETROIT BUS. J., Dec. 7, 1992, \$ 1, at 8 (reporting that Michigan considering reducing approved contractors for UST program to combat fraud).
\textsuperscript{130} 42 U.S.C. \$ 6991 (1988).
\textsuperscript{131} Flow-through process tanks are excluded from regulation, for example. See 40 C.F.R. \$ 280.12. This definition has been very controversial, as Congress provided no guidance in the statute. See Yagerman, supra note 81, at 10,139. Dry cleaning tanks are eligible for this exemption, but other similar tanks are not. See id.
\textsuperscript{133} See 40 C.F.R. \$ 280–81 (effective Dec. 22, 1988).
\textsuperscript{134} For petroleum USTs, the regulations require monitoring every 30 days, using one of several specified procedures. 40 C.F.R. \$ 280.41(a).
\textsuperscript{135} 40 C.F.R. \$ 280.50. The reporting obligation rests with both owners and operators of USTs. Id. Reports are made to state or local agencies, not EPA.

Operators are persons who have control of or responsibility for the daily operation of the tank. 42 U.S.C. \$ 6991(4). The definition of owner is two-part. If a tank was in use before November 8, 1984, and was no longer in use on that date, the owner is any person who owned the tank immediately before use ended. If the tank was in use on November 8, 1984 or brought into use later, the owner is any person who owns a UST used for storage or dispensing regulated substances. 42 U.S.C. \$ 6991(3). Although the "owner" definition depends on the definition of "use" no definition of "use" is provided. If tanks in use after November 8, 1984 have multiple successive owners, are all owners liable if the tank leaks, the current owner, or owners of the tank after it began leaking? For a discussion of this definitional problem, see Yagerman, supra note 81, at 10,140.
\textsuperscript{136} 40 C.F.R. \$ 280.20(a)(1)–(4). Alternate designs must be approved by the local agency implementing the regulations. 40 C.F.R. \$ 280.20(a)(5).
require that owners upgrade existing USTs to meet the regulatory standards for new tanks before December, 1998, or close them. The regulations also specify how tanks should be closed. They provide detailed guidance for corrective action to clean up leaks. The regulations also allow the EPA to levy up to $10,000 per tank per day for violations by owners and operators of these regulations. In addition, violation of an EPA Administrative Order can cost the violator $25,000 a day for each day of non-compliance.

The UST regulators use Total Quality Management, which is a Japanese-style management structure that ideally encourages prompt and creative problem-solving. Even so, site investigation after a reported leak may take 67 to 141 weeks, and one to two years to begin cleanup, even at high priority sites. EPA attempts to hasten this process by allowing owners to clean sites in the short term without government involvement or approval, Because most UST leaks are relatively small, this policy may allow for quicker cleanups. If long-term correction is necessary, EPA will then oversee the cleanup, and accordingly, the public will participate in the cleanup.

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137 40 C.F.R. § 280.21(a). The deadline allowed 10 years from the regulation's effective date, December 22, 1988, for owners to upgrade their tanks. Id.
138 40 C.F.R. § 280.71.
139 40 C.F.R. §§ 280.60--.67 (1992). The UST corrective program attempts to learn some lessons from Superfund, by providing a self-implementing program that favors quick cleanup over a purpose and review document approach, and sets site specific cleanup targets rather than uniform national standards. See Yagerman, supra note 81, at 10,142.
142 See Yagerman, supra note 81, at 10,136 n.5, 10,146. Total quality management (TQM) was developed by W. Edwards Deming, a statistician who created this program working with post-war Japanese industry. See id. The UST program was the first federal program to utilize TQM. See id. Steven Cohen and Ronald Brand, who implemented TQM in the UST program, have written a book on how to use TQM in government. See STEVEN COHEN & RONALD BRAND, TOTAL QUALITY MANAGEMENT IN GOVERNMENT (1993). TQM is also endorsed as a tool to improve governmental performance, in DAVID OSBORNE & TED GAEBLER, REINVENTING GOVERNMENT 159-60 (Plume ed. 1993). In addition, TQM is mentioned as the kind of reform necessary to improve government's delivery of services in Vice President Albert Gore's National Performance Review. See Vice President Al Gore's Report of the National Performance Review, "From Red Tape to Results: Creating a Government That Works Better and Costs Less," 1993 DER 172 d145, Sept. 7, 1993, available in LEXIS, Nexis Library, BNA File.
143 Yagerman, supra note 81, at 10,142 n.103.
144 See 40 C.F.R. §§ 280.61--.65 (1992). Owner's activities must still be reported to the implementing agency. See id.
145 About 70% are relatively small. Yagerman, supra note 81, at 10,142. That is, these spills only require "product recovery and limited soils management." Id.
146 Id.
147 Id.; see also 40 C.F.R. §§ 280.66, 67 (1992). Although public hearings and review are required in the regulations, the PMAA notes that this requirement was expressly rejected during hearings in 1986. See House UST Hearing, supra note 123, at 190 (statement of Dave Robinson, PMAA). Public hearings add delay and costs to cleanups. Id.
EPA's regulations do not require specific technology. But they do attempt to prioritize cleanups so that those areas where effective cleanup can be accomplished, and where people depend on potable groundwater, will receive top priority. Generally, EPA has sought, in the UST regulations, to build a flexible and decentralized regulatory program. Accordingly, EPA defends TQM for permitting the agency to obtain expedient results without reliance on top-down management or numerical quotas.

Subtitle I of RCRA also mandates that EPA set minimum financial responsibility requirements for UST owners. Owners of tanks at petroleum marketing facilities that handle over 10,000 gallons of petroleum per month must carry $1 million for corrective action and liability per occurrence; for all other owners this coverage must be at least $500,000. Annual aggregate insurance for owners of 101 or more tanks is $2 million; for owners of 100 or fewer, the required coverage is $1 million. Although a liability cap of $3 million was proposed in early versions of the law, the current law contains no liability cap.

The financial responsibility element of the UST regulations has been very controversial, especially with small owners who argue that the requirements...
will force them from business. In response, EPA extended the financial responsibility deadline for small operators to December 31, 1993.

Subtitle I also formed a trust fund to clean up leaking USTs. This fund cannot, however, be used to offset financial responsibility requirements. Instead, the trust fund provides additional clean-up funds for owners who have met the financial responsibility requirements, for sites where no responsible party can be found and the situation requires prompt action, or for sites where the owner fails to comply with corrective action orders. The state or federal government may seek reimbursement of these costs from the tank's owners or operators.

EPA relies on state agencies to administer and enforce these regulations. If a state adopts its own program, EPA must review and approve that program, which by law must regulate the same aspects of tank performance and operations as the federal regulations, and

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156 Yagerman, supra note 81, at 10,143; Commons, supra note 76, at 291. Different sized owners are required to comply at different times. Petroleum marketers with more than 1000 USTs and nonmarketers with over $20 million in assets (Category I) were required to comply by January, 1989. Marketers with 100 to 999 USTs (Category II) were required to comply by October, 1989. Marketers with 13 to 99 USTs at more than one facility (Category III) were required to comply by April, 1991. Owners and operators with 1 to 12 USTs, or less than 100 USTs at one facility (Category IV) were required to comply by October, 1991.


158 42 U.S.C. § 6991b(h) (1988). This fund is called the LUST Trust Fund. It was initially authorized to have up to $500 million available, by .01 cent gas tax on motor fuel. The ceiling was met in 1990, and extended to $1 billion by Congress. Yagerman, supra note 81, at 10,143 n.122. In 1993 the House Appropriations Committee budgeted $75.37 million in addition for the LUST Trust fund. See EPA, House Appropriations Committee Approves $6.63 Billion EPA Fiscal 1994 Budget, BNA Daily Report for Executives, June 23, 1993, available in LEXIS, Nexis Library, BNA File.

Because this provision was designed to close the CERCLA trust fund's "loophole" excluding petroleum, this trust fund is limited to cleaning up petroleum UST leaks. See Yagerman, supra note 81, at 10,144.Leaks from USTs containing hazardous substances are cleaned up under CERCLA. Id.


can be no less stringent than the federal requirements. In states with approved programs apply their program in lieu of the federal program, with EPA retaining authority to enforce provisions of the state's program. In states without approved programs, tank owners must comply with both federal and state regulations. States may also obtain partial approval, subsuming only a part of the federal requirements.

D. Developments

By providing for state enforcement and state promulgation of stricter corrective standards, the UST regulations set a federal floor for tank engineering standards and remediation. At the time they were passed, these regulations were touted as an example of "New Federalism" and proof that EPA understood the importance of decentralized administration and flexible response.

Alternatively, this distribution of authority could be viewed as an effort by federal regulators and Congress to benefit by controlling UST activity without bearing the monetary costs. Furthermore, the UST clean-up system only provides flexible, results-oriented regulation if the "floor standards" are themselves flexible or modest. Although some discretion is allowed to states in the corrective action language, the engineering standards for tanks are quite specific. The regulations specify performance standards for new USTs with notification requirements, reporting requirements for suspected

163 See 42 U.S.C. § 6991e(a)-(b) (1988); ARBUCKLE, supra note 132, at 609. In contrast, RCRA Subtitle C hazardous waste state authorization criteria require that state programs be equivalent to the federal program. 42 U.S.C. § 6926(b) (1988). Thus, rather than create a uniform federal system for UST regulation, these criteria set objectives and allow state programs to meet them. Yagerman, supra note 81, at 10,145. EPA seeks to encourage a wide range of programs designed to meet the needs of each state, because of the large numbers of tanks, the large number of small owners, and the complicated life-cycle regulation required by Congress. Also, many localities had already adopted UST regulation when the federal rules were promulgated. Id. Therefore, in EPA's view local control was necessary for successful regulation. Id.
164 42 U.S.C. § 6991e(a)(2) (1988); Yagerman, supra note 81, at 10,138 n.36.
165 Yagerman, supra note 81, at 10,138.
166 Id.
167 See S. 1560 Hearings, supra note 112, at 82 (statement of Don Clay, Assistant Administrator, Office of Solid Waste and Emergency Response, EPA); Yagerman, supra note 81, at 10,136.
168 Interview with Dr. Roger Meiners, Professor of Economics at the University of Texas-Arlington, in Bozeman, Mont. (July 29, 1993).
169 See S. 1560 Hearings, supra note 112, at 8 (statement of Senator Alan Simpson). Simpson noted that engineering and corrective action standards that make sense for the risks confronted in populous urban areas may not be appropriate for rural areas. Id.
and confirmed leaks, and inventory monitoring with recordkeeping requirements. Because new tanks must prove compliance with technical standards, and old tanks must meet these standards by 1998, the federal UST regulations provide a dramatic example of shifting the report-driven burden from regulators to the private sector. In addition, when an owner closes a tank, he must report to EPA or the local reporting agency, measure for contamination, and maintain records to prove he observed operating and closure regulations.

The statutory financial responsibility levels also have been the subject of controversy; congressmen who supported these requirements now find constituent tank owners complaining that insurance is unavailable. A study prepared in 1990 confirmed that small businesses had difficulty meeting financial responsibility requirements because insurance was not readily available. As small operators

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173 Regulations that try to secure rapid enforcement often contain procedures that make it easier to secure a violation. Eugene Bardach & Robert A. Kagan, Going by the Book: The Problem of Regulatory Unreasonableness 66–67 (1982). Through recordkeeping requirements, enterprises must constantly be prepared to prove compliance. Id. at 49–51. The regulation thus shifts the burden of proof from the prosecuting agency to the enterprise. Id. This shift requires the enterprise to prove a negative—that it did not violate the regulation. Id. The most dramatic form of burden-shifting is regulations that require enterprises to obtain agency clearance before engaging in an activity. Id. at 51. When the enterprise seeks prior approval, it must prove its attainment of lawful standards before being permitted to engage in an activity. Id. Thus it must either show foreseeable compliance, or that its plans meet specified standards. Id. Denial of the permit is the agency’s sanction for failing to meet this burden of proof. Id.

174 40 C.F.R. §§ 280.50–53. This burden shifts not just to tank owners, but to sellers of tanks and of petroleum, because the regulations require them to notify the tank owners of their notification duties. 42 U.S.C. § 6991a(a)(5)–(6) (1988). The EPA can fine a liable party up to $25,000 a day for non-compliance, and up to $10,000 a day per tank for improper notification or a standards violation.

175 These levels were met by most Category I enterprises through self-insurance. Category II enterprises seemed to be able to find insurance. Category III and IV enterprises had difficulty finding insurance. This difficulty prompted the Senate to consider delaying the financial responsibility requirements for these small owners one year in S. 1560 (1990). The financial responsibility requirements have been delayed for Category III and IV until December, 1993. These levels may be suspended if a state forms a fund to compensate victims and clean up spills.

176 See S. 1560 Hearings, supra note 112, at 1. (statement of Senator Max Baucus).
177 General Accounting Office, Underground Petroleum Tanks: Owners’ Ability to Comply with EPA's Financial Responsibility Requirements 3–4 (1990) (summarizing study results). When asked whether this situation would improve if the liability level were lowered below $1 million, respondents noted that most risks insured against were below $50,000. Id. at 30–31. This study also revealed that deductibles did not vary much with risk, but premiums varied widely, from $800–$1,600 a tank, and from $1,600–$19,000 a site. Id. at 4.

One of the largest insurance providers, Petromark, went out of business in April, 1990. Id. Petromark was one of ten insurance companies that wrote liability and corrective action cover-
complain, the regulatory deadline for their compliance continues to be pushed back.\textsuperscript{178}

The financial responsibility requirements have had a perverse effect. Because the requirements must be met before the UST engineering standards, the regulations send owners of old tanks into an unfriendly insurance market before upgrading.\textsuperscript{179} Senator Symms noted that this phenomenon is backward from the way supporters envisioned the program: the owner would first be required to invest in new equipment and then purchase insurance.\textsuperscript{180} When insurers require tank upgrades before writing policies, as most do, the financial liability requirements compress the 1998 technical requirements forward to the owner's deadline for obtaining insurance.\textsuperscript{181}

The uncertain liability situation in this area has hampered owners' efforts to upgrade tanks. The regulations specify that the Federal Water Pollution Control Act third-party defense applies to USTs, rather than the narrow Superfund third party defense.\textsuperscript{182} RCRA forbids owners from using indemnification or hold harmless agreements to transfer from the tanks' owners or operators, or third parties, liability for UST leakage.\textsuperscript{183} Even so, banks have refused to lend funds to UST owners to pay for tank upgrading based on the fear that third-party liability for environmental damage under RCRA could be construed as broadly as Superfund liability, under which banks have been held liable for clean-up costs.\textsuperscript{184}

In summary, the UST statutes came before Congress just as concern for pollution from leaking USTs was growing. The resulting age for small tank owners. Id. Lloyd's of London assumed their policies and as of March, 1991 accounted for 29% of this insurance market. See House UST Hearings, supra note 123, at 189 (statement of Dave Robinson, Petroleum Marketers Association of America). Federated insured 22% and Agricultural Excess insured 25% of the market.

\textsuperscript{178} See supra note 156 and accompanying text.

\textsuperscript{179} The initial 1984 UST regulations allowed 10 years from the regulations' enactment for old tanks to meet engineering specifications. The 1986 amendments that added the financial liability language, required coverage by 1990 for Category III and IV owners. Thus owners were required to purchase insurance before they were required to upgrade tanks.

\textsuperscript{180} See S. 1560 Hearings, supra note 112, at 10 (statement of Senator Symms) ("instead of protecting against leaks, the current program acts as a very large, very expensive band-aid"). Senator Symms notes that when small rural gas stations close, they impose another environmental hazard. Either rural residents must drive further to obtain fuel, or will install their own tanks. Id. at 11.

\textsuperscript{181} See S. 1560 Hearings, supra note 112, at 94 (EPA's answers to questions posed by Committee).


\textsuperscript{183} Yagerman, supra note 81, at 10,145.

\textsuperscript{184} See House UST Hearings, supra note 123, at 192 (statement of Dave Robinson, Petroleum Marketers Association of America).
regulatory regime sought to clean sites, prevent leaks, and control liability using decentralized and flexible management tools. These regulations, however, set ambitious targets, and thus proved to be less flexible and responsive than promised. The financial responsibility requirements in particular served to make a difficult insurance situation more complicated. As described below, these requirements, coupled with federal and state administrative enforcement, have led to a perverse funding situation that hampers environmental cleanup.

IV. Administrative Enforcement of UST Regulations

Both federal and state agencies enforce UST regulations through administrative orders and penalties. When confronted with an enforcement action, a UST owner faces a complicated hearing and appeals process. The enforcement action usually requires that the owner comply with dictated remediation procedures, and pay penalties to the government. Often, however, the particular state has formed a fund, funded usually through fees on USTs and petroleum deliveries, to cover the owner's financial responsibility required under federal law. But these state funds are running out of money. Contaminated sites sit without the funds to begin or continue remediation, while liable owners are caught uninsured, having assumed the state's fund would cover these costs.

A. Federal Administrative Enforcement

EPA enforces the UST regulations at the federal level. Accordingly, EPA sets penalties using informal agency documents known as civil penalty policies. The civil penalty policies seek to deter polluters,

185 In addition to requiring regulatory compliance, the enforcing agency may require further acts to "fully" comply with a regulatory regime, as necessary to protect human health or the environment. See In re Sandoz Pharmaceuticals Corp., 1992 WL 166471, at *3 (July 9, 1992). In this appeal, the environmental appeals panel considered whether UST corrective action could be required by the EPA in a permit regulating solid waste under omnibus provisions in RCRA. New Jersey had already issued Sandoz a permit for this site. To exercise this general authority, the EPA (Region II) had to show that its permit conditions were necessary to protect human health or the environment. See id. at *4. In a complicated opinion this panel found that Sandoz's remediation efforts and the geology of the site indicated that no danger justified the EPA's additional requirements. See generally id. Apparently the EPA could require additional UST corrective action beyond what a state program requires in a solid waste permit if it could make the case that the additional requirements protected human health or the environment. See id. at *4.

186 See Barnett M. Lawrence, EPA's Civil Penalty Policies: Making the Penalty Fit the Violation, 22 ENVT. L. REP. (Envtl. L. Inst.) 10,529 (1992) [hereinafter EPA's Penalty Policies]. Although the UST statute limits civil penalties to $25,000 a day for order violations, or
provide fair and equitable treatment of regulated industries, and secure rapid resolution of environmental problems. Penalties should, under the policy, remove the economic benefit potentially gained by the violator from having neglected his regulatory obligations, such as by continuing to operate a UST that might be leaking. EPA also includes additional penalties as appropriate given the level of harm caused by this violation. This final penalty figure is then adjusted to reflect the violator's willfulness, prior violation record, ability to pay, and other specific factors. The penalty may be decreased as an incentive for the violator to settle his case.

For example, following these guidelines, in a 1992 ruling the EPA fined Coastline Purchasing Corp. $141,722 for UST violations. Coastline had failed to file notifications on time after acquiring five USTs, had not emptied tanks or filed reports required for product removal, had not inspected the site and submitted inspection information as required, had not filed a corrective action plan, and had not installed leak-detection devices on the tanks. The regulations required Coastline to report these USTs 30 days after acquiring them, in their case by November 13, 1986. The company reported four of their USTs on May 22, 1989. The portion of the total fine for failure to notify was $67,500, for failing to remove product was $10,639, for failing to determine contamination was $10,719, and for filing a cor-

$10,000 a day per tank for notification failure or for submitting false information, this limit is usually only a concern for egregious violations of short duration. See 42 U.S.C. § 9006(a) (1988); EPA's Penalty Policies, supra, at 10,530.

The EPA's internal documents cannot be cited to create rights in legal actions, and the EPA may change these policies at any time without public notice. Id. at 10,531. Even so, administrative law judges and courts often use these guidelines when setting penalties. Id. Plaintiffs in citizens suits have used the guidelines to negotiate a penalty with the defendant. Id. (citing Gwaltney of Smithfield Ltd. v. Chesapeake Bay Foundation, 484 U.S. 49 (1987)). Thus, these policies may be exceeded or reduced in court, and do not command judicial deference as regulations do. See id.; Friends of the Earth v. Archer Daniels Midland, 780 F. Supp. 95 (N.D.N.Y. 1992) (holding that civil penalty policies not binding and thus not entitled to deference); Chevron, U.S.A., Inc. v. NRDC, 467 U.S. 837, 844 (1984) (providing judicial deference to administration of statutes).

187 See EPA's Penalty Policies, supra note 186, at 10,531.
188 These two components are called the "benefit" component and the "gravity" component. The EPA has a computer model, known as BEN, that calculates economic benefit derived from non-compliance. EPA's Penalty Policies, supra note 186, at 10,532. A table explaining the potential for harm of various UST violations is in Michael L. Italiano et al., Liability for Storage Tanks 262-66 (2d ed. 1992).
189 See EPA's Penalty Policies, supra note 186, at 10,532.
191 See id. at *1-2. According to the order, the site had been leaking.
rective action plan late, and failing to implement it, was $18,278. The order also indicates that Coastline had removed the tanks on October 31, 1990.\textsuperscript{194} Coastline had also failed to file pre-hearing documents within the prescribed deadline, and had subsequently failed to file an explanation (also required) accounting for the first failure to file. Thus, Coastline defaulted on the complaint, and was assessed this fine.\textsuperscript{195} Because Coastline defaulted, no public record indicates why they failed to report their USTs on time, or comply with the other regulations.

The penalty guidelines adjusted this penalty upward based on several factors.\textsuperscript{196} The guidelines called for multipliers because a failure to notify the agency about USTs is considered a violation with a major potential for harm, and a major deviation from the regulations.\textsuperscript{197} Failure to remove free product is also factored in as a major violation, and because the corporation, although asked to remove the product, failed to do so, the penalty is adjusted up again for "lack of cooperation."\textsuperscript{198} Estimated avoided costs were also worked into the penalty, and multiplied by an eleven percent interest rate.\textsuperscript{199}

EPA also assesses penalties when UST owners violate EPA's administrative orders.\textsuperscript{200} Although EPA may modify fines for violations of orders under their penalty policies, generally fines for order violations are assessed at the maximum level of $25,000 a day.\textsuperscript{201} These fines often heavily penalize UST owners for paperwork non-compliance, thus exacting heavy punishment for acts that do not directly harm the environment. Therefore, even without any indication of environmental risk the EPA can craft a hefty fine for nonfeasance, although these fines will also be increased based on estimates of environmental risk.\textsuperscript{202}

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{194} Id. at *2–7. The portion of the fine for failing to implement required leak detection was $34,586.
\item \textsuperscript{195} Id. at *1. See 40 C.F.R. § 22.17(a) (1992).
\item \textsuperscript{196} See Coastline Purchasing, 1992 WL 156105, at *2.
\item \textsuperscript{197} See id.
\item \textsuperscript{198} Id.
\item \textsuperscript{199} Id.
\item \textsuperscript{200} See EPA's Penalty Policies, supra note 186, at 10,536–37.
\item \textsuperscript{201} See id. at 10,536. These policies have led to record fine collections, but the GAO has criticized the EPA for not monitoring regional office's application of these guidelines. Id. In response, the EPA has adopted tougher policies to monitor RCRA penalties. See EPA, RCRA Civil Penalties Policy, ELR ADMIN. MATERIALS 35,273, 35,274 (Oct. 1990).
\item \textsuperscript{202} See Coastline Purchasing, 1992 WL 156105, at *2 (default order); Moyer Chevron Serv., 1992 WL 293134, (EPA Sept. 11, 1992) (default order). In Moyer, the owner failed to provide release detection for three pressurized lines. He was fined $1000 for every 30 days from December 22, 1990, when the requirements began, to August 21, 1991, when EPA testing
\end{itemize}
\end{footnotesize}
A UST owner's right of appeal of a permit or penalty decision is limited under federal administrative law. Permits or permit denials can only be appealed on issues that the UST owner preserved through raising them during the comment period. Agency permit decisions are only reexamined by environmental appeals judges if based on clearly erroneous findings of fact or conclusions of law, or if the agency decision involves an important policy matter or exercise of discretion that justifies review.

A UST owner found in violation of the regulations also has limited due process rights under administrative law. Tank owners under EPA scrutiny are notified if an enforcement action is started against them. A hearing is not automatic; the owner must respond to this notice or he may be found in default. If in default, civil penalties and corrective action can be charged to him, without any hearing, and without the facts as alleged by EPA receiving neutral scrutiny. If the owner requests a hearing, the public is permitted to participate, which means that neighbors, public interest groups and competitors may bring their concerns before the agency as well. Due in part to this added participation, public hearings may absorb a large quantity of time.

personnel visited his station and found he had not conducted a line tightness test or performed monthly monitoring. His total fine was $9166. There is no indication in the order that these lines leaked. Moyer Chevron Serv., 1992 WL 293134 at *1–2.

Public agencies are not immune to UST fines. In 1992 the EPA fined Detroit $1.5 million. See Vivian S. Toy, Financially Strapped Detroit Fined $1.5 Million by EPA, GANNETT NEWS SERV., Aug. 26, 1992, available in LEXIS, Nexis Library, OMNI File. These fines were levied because Detroit failed to properly report a confirmed leak and properly clean up leaks at two other sites. EPA detected these leaks during inspections of city-owned properties. Detroit also faced $10.2 million in remediation costs.

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Two additional distinctions between administrative actions and common law actions deserve discussion. First, administrative agencies are not bound by the rules of evidence applicable in court. For example, under the Administrative Procedures Act, hearsay evidence is admissible.
Judicial review of agency enforcement actions is critical for consistent law enforcement. It hardly makes sense for courts to recognize rights in legal actions and not require that the same rights be recognized in administrative actions. A defendant in an administrative action may wait a long time, however, before he can seek judicial review, and this review will be limited to certain narrow factors.

First, administrative remedies must be exhausted before going to court. A defendant's claim must provide a federal court with a case or controversy. The claim must therefore be an appeal of a final decision that the defendant has appealed through the administrative appeals process. A defendant cannot, therefore, take an order he believes in error directly into court when issued.

Second, courts show deference to administrative decisions. Once in court, usually the administrative decision will only be reviewed for exceeding the scope of authority provided by Congress, abusing authority, or for being capricious or arbitrary. In practice, the court will consider whether the action is within the agency's scope of authority.

Second, more plaintiffs have standing to sue to enforce regulations. Standing has always been a source for controversy. The traditional rule required that the party demonstrate that the agency had invaded a legal right before courts would recognize his standing to sue. The Supreme Court expanded this standard to allow standing to parties aggrieved or adversely affected by an agency action. Federal Communications Comm'n v. Sanders Bros., 309 U.S. 470, 473-77 (1970). The court in 1970 created the standing test functioning today: to have standing a party must suffer an injury in fact, which is linked to an agency action and redressable by judicial relief, and that injury is within the "zone of interests" protected by the statute the party seeks to enforce. Association of Data Processing Service Org., v. Camp, 397 U.S. 150, 152-55 (1970). The injury prong of this test has raised controversy. Sierra Club v. Morton, 405 U.S. 727, 737 (1972) (requiring individualized injury for standing). This test only requires that some individual injury be alleged. See, e.g., United States v. SCRAP, 412 U.S. 669, 684-89 (1973) (holding that very attenuated series of events eventually injuring party sufficient for standing). But see Lujan v. National Wildlife Federation, 497 U.S. 871 (1990) (requiring that plaintiff must plea specific facts that result in actual injury for standing). The Supreme Court appears to be more tolerant of liberal standing for environmental petitioners than for other types of groups. See Robinson, supra note 206, at 161-62.

208 But see Environmental Defense Fund v. Hardin, 428 F.2d 1093 (D.C. Cir. 1970) (holding agency's failure to act promptly resulted in irreparable injury was final disposition of rights). The court may also inquire whether the regulation is within the agency's discretion to promulgate. Chevron v. NRDC, 467 U.S. 837, 842-45 (1984). If Congress had "directly spoken to the precise question at issue" then the agency is obliged to enforce Congress's will. If, as is more often the case, Congress has not directly addressed the question, then the Court will examine whether the Agency's regulation is a permissible construction of the statute. Id. at 842-43. That is, the Court should accept the Agency's interpretation if the statute is susceptible of interpretation—and should tolerate new regulations if the Agency changes its mind. The
consider whether the act was arbitrary or capricious, or contrary to the law Congress assigned the agency to enforce.\textsuperscript{210} These standards, however, do not have much bite, so generally agencies are safe promulgating regulations and enforcing them.\textsuperscript{211}

In summary, enterprises faced with penalties and corrective action under UST statutes may never obtain a day in court. They may decide that the delay in resolving their problem and the advantage of obtaining settlement and immunity from EPA for the incident, makes litigation not worth the trouble. They may also find that the regulatory action is not reviewable by a court of law.

It is questionable whether such limitations on judicial review are wise. Selective invasive judicial review in some contexts had led to an irrational patchwork of laws and rulings.\textsuperscript{212} Still, courts may be able to correct and deter far-flung regulatory adventures prompted by interest group pressure.\textsuperscript{213} This may be particularly true when regulators set penalties, assign corrective action, and control access to reimbursements, as with the UST regulations. In these circumstances, court review can insure that agency decisions are evenhanded, and reflect real-world technical realities.

B. State Administrative Enforcement

Because the federal UST program was designed to be implemented by states, most actions against UST owners arise under state administrative law. Thus, a brief overview of a few recent state-level actions dealing with USTs is instructive. States have, for the most part, incorporated the federal government's minimum standards instead of setting stricter standards.\textsuperscript{214} Furthermore, state funds to compensate Court should not substitute its interpretations for the Agency's. See Antonin Scalia, \textit{Judicial Deference to Administrative Interpretations of Law}, 1989 \textit{Duke L.J.} 511 (1989).


\textsuperscript{210} The courts that take the harshest view of administrative decisions often favor stricter regulatory control and greater agency activism. See Melnick, \textit{supra} note 206, at 12.


\textsuperscript{214} State agencies also use federal statutory interpretation to interpret these state statutes. See Shell Oil Co. v. Illinois Envtl. Pro. Agency, 1993 WL 210603 (June 3, 1993) (arguing that
victims of leaking USTs and clean up sites struggle with a tension between keeping the fund's fuel taxes low while maintaining sufficient funds to clean sites.215

Many state jurisdictions follow penalty criteria similar to the federal criteria described above.216 These criteria consider an owner's history of violations, the gravity of the current violation, whether a violator benefited economically by violating the regulations, the degree of risk to the community, and whether the violation was intentional.217 An additional "penalty" may be exacted by the state by denying state clean-up funds to tank owners who fail to follow state tank regulations.218

federal owner definition prevented Shell from receiving state reimbursement for corrective action, reversed by pollution control board).


However, penalties may also be arrived at in settlement without using criteria. See Mapco Petroleum Inc., 1993 WL 113579 (Tenn. Dept. Envtl. Conserv. Mar. 17, 1993). In this final order a gas station owner settled with the Tennessee Department of Environmental Conservation for $7500 damages, $7500 penalty and a potential $20,000 penalty if the owner failed to comply with the order's requirements. The tank owner failed to report a leak, and failed to provide inventory records that would have indicated shortages from his tanks. This order required him to clean up his site, continue testing for contamination, and stipulated that he would be ineligible for any state reimbursement from the Underground Storage Tank Fund.

Massachusetts settled a suit against several oil companies for underground contamination near Provincetown, Massachusetts, for $3.14 million. This was claimed to be the largest settlement recovered by a municipality for oil leakage that did not contaminate a municipal water supply. See Parties Reach $3.14 Million Settlement in Leaking Underground Storage Tank Case, OIL SPILL INTELLIGENCE REP., Dec. 3, 1992, at 9.

In what appears to be the first case of its kind, the Orange County District Attorney has obtained an indictment against owners of several leaking USTs for felony illegal underground storage of hazardous waste. O.C. Couple Arrested in Hazardous Material Case, L.A. TIMES, May 22, 1992, § A at 3 (Orange County ed.). The indicted couple owned 150 southern California gasoline stations and were accused of falsifying tank tests.218 See Lloyd Properties, 1993 WL 42259 (Cal. St. Wat. Res. Bd. Jan. 21, 1993). In this order the state denied a tank owner state fund reimbursement for his cleanup expenses. The owner
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As in the federal context, a state administrative law judge's application of penalty criteria is subject to administrative appeal, but on appeal the enterprise must show that the judge erroneously applied the criteria. Although an enterprise cannot question the fact findings made by the judge,219 an order's corrective action requirements may be appealed.220 Many state administrative appeals involve regulatory decisions to deny reimbursement from state UST funds for corrective action.221

Most states have established funds to clean up tank sites and compensate victims. These funds take the place of the financial responsibility requirement in federal law. Usually, the fund's budget is supplied by a tax on fuel sales.222 In such a case, a tension exists between cleaning up sites in cases where no liable and financially capable party can be assigned the costs, and keeping the fuel tax level low.223 In addition, clean-up contractors wary of their own liability seek to provide expensive and extensive remediation rather than control costs.224

spent $86,000 and expected to spend another $124,500. Although the owner had obtained proper permits for removing his tanks, because he had failed to obtain an initial tank owner's permit, the Board found he was ineligible to collect Fund reimbursement. The tank had been out of use since 1981. Id.


The IRS rejected an attempt to fund UST remediation by issuing tax-exempt municipal bonds. See Lynn S. Hume, IRS Won't Exempt Ohio Bonds to Fund Cleanup of Private Oil Tanks, Pub. Finance/Wash. Watch, Nov. 30, 1992, at 7. The IRS instead concluded that these bonds would be taxable private activity bonds. Id.

Some states seek to control fund expenditures by placing deductibles on enterprises that are large enough to be self-insured. Others place strict guidelines on what permits a tank owner must acquire before he can be reimbursed for site remediation. Even so, state funds run out of money. In Michigan, for example, the state receives $4 million every month in fee revenue for its fund to cover payments of $15–17 million in requests. At the end of fiscal year 1992, Florida’s fund held a balance of $24 million, but $139 million in claims had been filed against it. Even in states with solvent fund programs, the state is slow to reimburse claims. A recent study estimates that these state funds have collected $900 million a year in fees, but have paid out only $926 million, and only 44,000 sites have been cleaned up, an estimated ten percent of the total. EPA has yet to promulgate regulations to address what happens when state funds that replace

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225 See Brian, Legislature Changes Tank Law to Facilitate Access to Cleanup Funds, CRAINS WICHTA Bus. J., June 5, 1992, § 1, at 20. The provision in Kansas’s UST law that required a $100,000 deductible for UST owners capable of self-insurance was found unconstitutional. Id.


227 See L.H. Otis, Mounting Pollution Risks Confront State Lawmakers, NAT’L UNDERWRITER, Nov. 30, 1992, at 2 (reporting shortfall in South Carolina’s UST clean-up fund); Amber, supra note 224, at 1 (reporting that Michigan’s fund, MUSTFA, ran out of money, contractor fraud suspected); Marilyn, supra note 95, at 1 (reporting that state’s $3 million fund already used for that year). Michigan declared that it could no longer accept claims for UST remediation. See Carolyn Claerhout, Financial Difficulties Shake the Michigan Underground Storage Tank Fund, MICH. LAW. Wkly., Nov. 30, 1992, at 2. The Texas Water Commission’s Petroleum Storage Tank Trust Fund has also run out of money. Laurel B. Calkins, Environmental Fund Tapped Out; Contractors Fold, Lay Off Workers, CRAINS HOUSTON Bus. J., May 17, 1993, § 1, at 1. In 1989, the fund was formed to gather $60 million in fees annually, but by January, 1993, all funds were spent, and $143 million in unpaid UST claims had accumulated. Id. Owners understand that reimbursement will not come quickly, and have slowed remediation efforts. Id. Contamination will spread during this delay, resulting in more costly remediation when funds are again available. Id.


231 See $42 Billion More Needed for LUST Cleanups, SUPERFUND WK., Dec. 25, 1992 (quoting The Underground Storage Tank Market: Its Current Status and Future Challenges, by Environmental Information Ltd. of Minneapolis, Minn.)
private liability requirements under the UST regulations become insolvent.\textsuperscript{232}

\section*{C. Massachusetts UST Regulation}

Massachusetts's state UST program provides a good example to examine more closely, because Massachusetts is densely populated and has historically shown concern for environmental safety. Massachusetts's UST regulations are stricter than federal standards.\textsuperscript{233} Owners and operators of USTs in Massachusetts are held responsible for UST leaks and remediation costs under the Massachusetts Oil and Hazardous Material Release Prevention and Response Act.\textsuperscript{234} Massachusetts regulates USTs that store substances as specified in RCRA, and also USTs storing flammable liquids.\textsuperscript{235} Massachusetts requires permits for all USTs, and when upgrading, closing or removing USTs.\textsuperscript{236} The Massachusetts Contingency Plan requires that the com-

\textsuperscript{232} See Calkins, supra note 227, at 1 (quoting EPA spokesman David Bary, noting that although EPA has no regulations, UST owners may be found in non-compliance even though funds cannot cover remediation costs).


As a “home rule” jurisdiction, Massachusetts state law does not preempt local regulation of USTs. Thus, the owner or operator of a UST faces a confusing patchwork of state and local regulation. See Gregor I. McGregor, Federal State and Local LUST Law, 1993, at 8–14 (on file with author). McGregor notes that every community on Cape Cod has their own UST bylaw or regulation. Id. at 9.

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These regulations also provide for private actions against owners and operators of leaking USTs. See MASS. GEN. L. ch. 21E, §§ 4, 11A(4) (1992); Mailman's Steam Carpet Cleaning Corp. v. Lizotte, 616 N.E.2d 85, 87 (Mass. 1993) (noting that plaintiff's award under ch. 21E limited to costs already incurred); Griffith v. New Eng. Tel. and Tel. Co., 610 N.E.2d 944, 945–46 (Mass. 1993) (Applying ch. 21E to allow party spending money on remediation to recover costs from another liable party). The statute sets a three year statute of limitations for 21E reimbursement actions. MASS. GEN. L. ch. 21E, § 11A(3) (1992). This statute of limitations was added in 1992.

monwealth be notified within two hours after discovery of a release or threat of release.\(^{237}\) Violations may be punished with civil penalties of up to $25,000 per violation per day.\(^{238}\) For failure to notify of a release, an owner or operator may face a $100,000 fine or 20 years in jail.

To satisfy liability coverage requirements in federal UST regulations, the Massachusetts legislature enacted the Massachusetts Underground Storage Tank Trust Fund (Fund) in 1990.\(^ {239}\) Fees charged for petroleum delivery and tank usage supply this fund with revenue.\(^ {240}\) Although the Fund is capped by statute at $30 million, fees would be reinstated if the Fund’s balance falls below $10 million.\(^ {241}\) The Underground Storage Tank Petroleum Product Cleanup Fund Administrative Review Board (Board) can also adjust fees by regulation if the statutory funding level proves inadequate.\(^ {242}\)

The Massachusetts statute limits reimbursements to $1 million per tank for response action and $1 million for third party injury or damage reimbursement.\(^ {243}\) To obtain reimbursement, UST owners must be in full compliance with all federal and state regulatory requirements.\(^ {244}\) To obtain reimbursement for third party judgments the applicant owner or operator must have obtained a final judgment and must have exhausted his rights of appeal.\(^ {245}\) If the Board denies reimbursement, the applicant has thirty days to seek appeal, but has no right to appeal non-payment based on inadequacy of funds.\(^ {246}\)

The Massachusetts legislature authorized this Fund in 1990, and as of September, 1993 the Fund contained $23.9 million in fees.\(^ {247}\) Until the Board enacts implementing regulations, however, no funds will be available to tank owners, operators, or injured parties.\(^ {248}\) Nevertheless, if an applicant fails to obtain money from the Fund, his remediation obligations do not cease. Thus, a Massachusetts tank owner and


\(^{248}\) See McGregor, supra note 232. McGregor suggests that these regulations will be in place by early 1994. Telephone Interview with Gregor I. McGregor (Oct. 22, 1993).
operator, whose financial liability obligation is purportedly assumed by the state's trust fund, may also need to obtain private insurance if the trust fund is unable to reimburse his expenses.

V. THE REGULATORY IMPACT ON UST LITIGATION

Underground tanks are now comprehensively regulated by state and federal agencies. Still, in some cases, plaintiffs seek compensation via common law actions. When states dictate remediation and pay compensation, however, the exercise of this state power may effectively preempt private recovery. As a result, litigation now is commonly over who owes the state reimbursement—the UST owner, the insurance company, or a third party.

Plaintiffs plead trespass, nuisance and strict liability for abnormally dangerous activities to obtain compensation for UST damage. Modern interpretations of nuisance and trespass, however, often prevent plaintiffs from using nuisance and trespass in most UST contexts. Also, many jurisdictions do not recognize underground gasoline storage as an abnormally dangerous activity.

Early leaking oil cases held polluting defendants strictly liable for damages arising from oil leaking from their tanks. As the twentieth century progressed, however, the negligence rule replaced the strict liability rule in nuisance actions in some jurisdictions, and made it more difficult for injured neighbors to recover. Despite this trend,

249 A plaintiff may pursue a statutory claim, or a common law claim. Statutory claims can be filed using RCRA, which allows citizens suits against past or present generators of hazardous waste, because the gasoline leaked from a UST can be considered the disposal of solid waste. See, e.g., Zands v. Nelson, 779 F. Supp. 1254, 1264 (S.D. Cal. 1991). This statutory suit would be barred, however, if the EPA has already brought an action or has commenced a cleanup. 42 U.S.C. § 6972(b) (1988). In addition, state law may provide private rights of action under state UST regulations or other state environmental regulations. See, e.g., N.J. Stat. Ann. § 58:10-23: 11f(a)(2) (West 1992). Not all state statutes provide a private cause of action. See Lyden Co. v. Citgo Petroleum Corp., 1991 U.S. Dist LEXIS 19783, at *8-11 (N.D. Ohio Dec. 15, 1991) (denying plaintiff's action under Ohio's UST regulations because regulations provide no private cause of action). Some states only provide for declaratory or equitable relief, but no monetary damages. See Zoufal v. Amoco Oil Co., 1993 U.S. Dist. LEXIS 4920, at *11 (E.D. Mich Mar. 19, 1993) (noting that Michigan's Environmental Protection Act provides only declaratory or equitable relief).

250 See Gavigan v. Atlantic Refining Co., 40 A. 834, 835 (Pa. 1898) (holding that this point so settled it would be a “waste of time” to review the cases); Hauck v. Tide Water Pipe-line Co., 26 A. 644, 645 (Pa. 1893) (holding that if oil brought from a distance, leaking onto neighbors property and caused damage, pipeline owner strictly liable). Pennsylvania codified this standard into state law. See Jackson v. United States Pipeline Co., 191 A. 165, 165-66 (Pa. 1937) (noting that under P.L. 896 § 1 defendant strictly liable without negligence of oil from pipeline polluted neighbor's well).

some jurisdictions continued to recognize that owners of tanks or
equipment that leaked oil and caused a nuisance were strictly liable
for damages.\textsuperscript{252}

Modern common law courts also require intent for a plaintiff to
prevail on a trespass claim.\textsuperscript{253} Although this intent requirement is
applied consistently in leaky oil tank cases, in other areas plaintiffs
may still recover in trespass absent a showing of intent.\textsuperscript{254} This con­
fusion may explain why this rule is still subject to dispute in cases on
appeal. Trial judges as well as plaintiffs find the inconsistent require­
ments for trespass confusing.

The only modern common law action that reliably allows a UST
plaintiff to plead strict liability is an action to remedy damage from
an abnormally dangerous activity. To prevail, therefore, the plaintiff
must establish that storing gasoline in an underground tank quali­
ifies as an abnormally dangerous activity. Courts make this legal con­
clusion on a case-by-case basis.\textsuperscript{255} Plaintiffs who prevail with this
argument have shown that the tank's placement near a well,\textsuperscript{256} or its

\textsuperscript{252} See Mel Foster Co. Properties v. American Oil Co., 427 N.W.2d 171 (Iowa 1988); City of
UNG1 owner strictly liable to proper plaintiff for damage caused by UNG2 leaks); Mowrer v.
Ashland Oil Co., 518 F.2d 659 (7th Cir. 1975) (holding that lack of negligence no defense to charge
that defendant maintained private nuisance).

\textsuperscript{253} See Kulpa v. Stewart's Ice Cream, 144 A.D.2d. 205, 207 (N.Y. App. Div. 1988); Hudson v.
Peavey Oil Co., 566 P.2d 175 (Or. 1977); Phillips v. Sun Oil, 121 S.E.2d 437 (Ga. Ct. App. 1973);
Injuries and Damages from Hazardous Wastes—Analysis and Improvement of Legal Remedies,
A Report in Compliance with Section 301(e) of CERCLA by the “Superfund” Section
301(e) Study Group (Part II), No. 97-12, 97th Cong., 2d Sess. 192 (1982) (memorandum from
Frank P. Grad) (noting that strict liability rule for trespass “has been virtually abandoned”).
For an air pollution case where the court found the requisite intent, see Bradley v. American

\textsuperscript{254} See Margosian v. United States Airlines, 127 F. Supp. 446, 466–67 (E.D.N.Y. 1955) (holding
that plaintiff could recover for damage to property from airplane crash without showing will­
fulness and intent or negligent operation).

\textsuperscript{255} See Injuries and Damages from Hazardous Wastes—Analysis and Improvement of Legal
Remedies, A Report in Compliance with Section 301(e) of CERCLA by the “Superfund” Section
301(e) Study Group (Part I), No. 97-12, 97th Cong., 2d Sess. 192 (1982) (noting that strict
liability cases for hazardous waste damage using inconsistent standards, are hard to compare).

size²⁵⁷ makes it uncommon or inappropriate. If a court follows the Restatement’s criteria for abnormally dangerous activities,²⁵⁸ it will also apply a cost-benefit analysis to assess the value that the activity holds for the community against the danger it poses to the injured party.²⁵⁹

Once a plaintiff in a leaking UST suit passes the negligence-liability hurdle, he must also plead and prove causation and injury. Causation may be difficult for a plaintiff to prove if several different gasoline stations could be the source of his contamination.²⁶⁰ Causation theories to compensate for a weak showing of a causal link between damage and the defendant’s conduct, such as the joint liability theory in Summers v. Tice,²⁶¹ are sometimes necessary in leaking tank cases.²⁶²

A successful plaintiff will also have to plead and prove that the leaking tank injured him. Compared with toxics cases, proving injury from oil leakage is more straightforward.²⁶³ Leaking oil creates a

²⁵⁸ Restatement (Second) of Torts § 520 contains these criteria:
(a) the existence of a high degree of risk, (b) the likelihood that the resulting harm will be great, (c) the inability to eliminate that risk by the exercise of reasonable care, (d) the extent to which the activity is not a matter of common usage, (e) the inappropriateness of the activity to the place where it is carried on, (f) the extent to which its value to the community is outweighed by its dangerous attributes.
²⁵⁹ Hauling gasoline as cargo has been found an abnormally dangerous activity. See Siegler v. Kuhlman, 502 P.2d 1181, 1187 (Wash. 1972).
²⁶⁰ See ARBUCKLE ET AL., supra note 132, at 58 (discussing problems with proving causation in toxic tort context).
²⁶¹ 199 P.2d 1,4 (1948) (holding two hunters jointly liable for plaintiff's injury even though plaintiff could not prove which hunter's bullet injured him).
²⁶³ Proof of injury difficulties in other kinds of toxics cases generally arise because the toxin is harmful in tiny doses not detectable by the injured party until years later when the injury
stench in drinking water and in contaminated soil, and can be detected in very small quantities in drinking water by taste. Homeowners are thus well aware of the contaminants, and may not consume the water.

The federal UST statutes and regulations do not preempt state statutory actions. Because the federal statute delegates to the states the authority to enforce state UST statutes, states may enforce their own regulations. An important question is whether these state regulations preempt state common law actions. The answer to this question usually requires a court to determine whether the state legislature intended to preempt common law actions when the UST statute was passed. Generally, if the potential plaintiff obtains compensation under the statute, then his common law rights are probably preempted. Moreover, UST regulations often assign liability before any appears. Common law courts in recent times have loosened injury proof standards to account for potential injuries with long gestations. In the Reserve Mining case, the court held that a potential health threat could be actionable if sufficiently serious. See Reserve Mining Corp. v. EPA, 514 F.2d 492 (8th Cir. 1975). In subsequent cases, courts have held that the fact finder in a trial has broad discretion to find injury when a plaintiff has been exposed to uncertain but provable (and substantial) risk. See Environmental Defense Fund v. EPA, 598 F.2d 62, 89 (D.C. Cir. 1978) (upholding EPA's prohibition on the discharge of PCBs based on evidence that was "at least suggestive of carcinogenicity"); Ethyl Corp. v. EPA, 541 F.2d 1, 17 (D.C. Cir. 1976) (concluding that no proof of actual harm was necessary to support regulation of lead in gasoline). But see National Lime Ass'n v. EPA, 627 F.2d 416, 458 (D.C. Cir. 1980) (stating that fact finder's determinations must be made in accordance with the preponderance of the evidence). See generally Daniel A. Farber, Risk Regulation in Perspective: Reserve Mining Revisited, 21 ENVT. L. 1321, 1322 n.4. Many courts have held that the fact finder must also consider imminence and magnitude, not just harm's probability. See Sierra Club v. Sigler, 935 F.2d 957, 970 (5th Cir. 1991); United States v. Northeastern Pharmaceutical and Chem. Co., 579 F. Supp. 823, 846 n.28 (W.D. Mo. 1984); Ayers v. Jackson, 525 A.2d 287 (N.J. 1987) (stating that the likelihood of harm is just one factor in determining proper intervention). The Reserve Mining holding has also been cited, however, to deny damages to plaintiffs based on unpredictable health consequences. See Harrison v. Indiana Auto Shredders Co., 528 F.2d 1107, 1125 (7th Cir. 1976); Spannaus v. Maple Hill Estates, 317 N.W.2d 53, 55 (Minn. 1982). Although oil plaintiffs usually can prove injury, to the extent that their damages may be extended by Reserve Mining, or that additional plaintiffs can maintain actionable suits, this less-rigorous proof of injury requirement may result in additional liability to owners of leaking oil tanks.

264 See Wilson, 398 S.E.2d at 591 (describing that plaintiffs tasted contamination before tests revealed gasoline in water); Moore v. Mobil Oil, 480 A.2d 1012, 1016 (Pa. 1984) (noting that resident's water would taste obnoxious at level below health hazard).

265 See, e.g., Alex Beasley, Toxic Chemicals on Tap, ORLANDO SENTINEL TRIB., Sept. 6 1992, § A, at 1 (describing resident's detection of gasoline in well water). In at least one case, however, plaintiffs continued to consume water contaminated by gasoline. See Cornell v. Exxon Corp., 558 N.Y.S.2d 647, 649 (Ct. App. 1990) (noting that defendant sought unsuccessfully to bar recovery under assumption of risk theory because plaintiff continued to use well water).

266 See U.S. v. Colorado, 990 F.2d 1565 (10th Cir. 1993) (CERCLA).
neighbor is harmed, and thus before any private cause of action would mature.267

Because the state effectively declares liability and injunctive relief in the form of remediation requirements under state or federal UST laws, the legal battle has moved to third party compensation, either by lenders,268 past owners,269 or insurance. Often, commercial insurance pollution clauses provide coverage only for "sudden and accidental" pollution, leaving the court to determine whether a leaking UST is sudden and accidental.270 Massachusetts courts have also wrestled

267 States may be slow to declare an activity a public nuisance if it complies with statutes. See RESTATEMENT (SECOND) OF TORTS § 821B, cmt. f (1977).

Still, common law actions are brought to remedy harm caused by leaking USTs. See, e.g., Wilson v. McLeod Oil Co., 398 S.E.2d 586 (N.C. 1990) (holding that continuing trespass from leaking UST not barred by statute of limitations); Citizens & Southern Trust Co. v. Phillips Petroleum Co., 385 S.E.2d 426 (Ga. Ct. App. 1989) (holding that continuing torts only for personal injury, not tortious property damage, plaintiff barred by statute of limitations).

268 In a very controversial decision, the United States Court of Appeals for the Eleventh Circuit held that lenders may be liable for hazardous waste cleanup under CERCLA if they participate in the financial management of a facility to the extent they could influence the facility's treatment of hazardous waste. United States v. Fleet Factors Corp., 901 F.2d 1550, 1557 (8th Cir. 1990) (upholding summary judgment, but holding that district court's rule for secured creditors too lenient); 21 ENV. L. REP. 10618 (Oct. 1991) (discussing Fleet Factors). New EPA regulations narrowed this holding, to make lenders only liable if they actively managed the failed business. Although a similar limiting regulation has not yet been promulgated for the UST statutes, observers expect the EPA will follow through on public promises to publish a regulation to limit lender liability. See Lenders Hopeful Clinton, Congress will Resolve Lender Liability Under Pollution Cleanup Laws, MORTGAGE MARKETPLACE, Dec. 21, 1992, at 3.


with the liability issues surrounding long-term leaking from USTs. In a recent case regarding interpretation of “sudden and accidental,” the Massachusetts Supreme Court reversed a trial court’s order of summary judgment in favor of an insurance carrier. This case suggests that leaking USTs are not always denied coverage under policies that cover only “sudden and accidental” discharges. Also, several state courts have held that government-mandated clean-up costs are also covered under commercial liability policies. The best defense insurance companies usually can argue is that the owner intentionally or knowingly allowed the leaking tank to discharge oil and cause harm.

Nevertheless, under UST regulations, once the court assigns liability, either the particular policy purchased to meet the state’s financial responsibility requirement or a state fund designed to satisfy the UST regulations will cover these expenses. As more states have formed funds to provide liability coverage for UST owners, the demand for private insurance has dropped.

Thus, the UST regulatory structure assigns rights and liabilities for most UST incidents. Although some plaintiffs continue to bring common law actions to remedy their injuries, most UST litigation revolves around reimbursement for state-ordered remediation costs. In most states, state-operated funds have taken the place of the private insurance market. When these funds run dry, no private al-

from an accidental incident rather than as a result of general operations, so insurance company has duty to defend defendant). Some states, however, have barred pollution exclusion clauses that only cover sudden and accidental emissions. See Gerrish v. Universal Underwriters, 754 F. Supp. 358, 368 (Vt. 1990) (interpreting insurance policy to cover UST leaks because state law barred pollution exclusion clauses); see generally Italiano, supra note 188, at 215, 235–39.


272 Id. at 236. Under Massachusetts case law, a leak caused suddenly that nevertheless leaks for a time before discovery would be covered under such a policy. See id.; see also James E. McGuire & Diane E. Kenty, Policyholders Benefit from Recent Laws; Environmental Liability Insurance, MASS. LAW. W.KLY., Aug. 3, 1992, at 41.

273 See, e.g., Alan Corp. v. International Surplus Lines Ins. Co., 823 F. Supp. 33, 39–40, 44 (D. Mass. 1993) (holding that under terms of policy insurance company not liable for cleanup coverage unless costs ordered by government agency); Id. at 39–40. (denying coverage because insurance company notified after end of policy period); Gastel, supra note 98, Italiano, supra note 188, at 225.

274 See Italiano, supra note 188, at 229.

275 As of November, 1992, 43 states had enacted legislation creating state-funded insurance for UST owners, generally financed by tank fees or fuel taxes. Gastel, supra note 98. Twenty-nine of these had been approved by EPA. Id.

276 See Deborah Shalowitz, Demand Drops for Cover for Underground Tanks; Buyers Turning to State Funds, Bus. Ins., Nov. 23, 1992, at 3.
ternative remains to pay for remediation and compensation, especially for small owners or operators.277

VI. CONCLUSION

Rather than produce a cleaner environment and compensate injured pollution victims, the UST regulatory regime has added a complicated legal layer to the problem of leaking USTs. At common law, a plaintiff suing for nuisance or trespass could, at least in some jurisdictions, hold the tank owner strictly liable for any damage. Municipalities could hold the owner liable for maintaining a public nuisance. Injunctive relief could require the owner to clean the site appropriately, and compensate injured neighbors via damages.

In some jurisdictions, these actions were harder for plaintiffs to maintain. Some courts required that plaintiffs show a defendant's negligence or intent to recover.278 Additionally, some leaking tanks had been abandoned, and thus no owner was available to sue. It cannot be denied that some jurisdictions were not providing effective remedies for damage arising from leaking USTs. Given the heightened public awareness of environmental harm and improved detection technology, more common law courts—if left alone—might have returned to the earlier and harsher trespass and nuisance standards.

The present UST regulatory regime, however, leads to new problems. Regulators levy heavy fines for paperwork violations that pose no risk to the environment, thus adding to the costs faced by UST owners but not providing a direct environmental benefit.279 The corrective action standards require enormously expensive remediation techniques.280 The financial responsibility requirements have forced owner's long-term technical improvements into the present.281 The federal regulations allow states to develop funds as an alternative to these financial responsibility requirements. As states have developed these funds to cover clean-up costs, however, the private insurance

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277 State financial responsibility programs may also, perversely, delay cleanup. See Italiano, supra note 188, at 216–17.
278 See supra notes 11–69 and accompanying text.
279 See supra notes 182–86 and accompanying text.
280 As these costs drain state remediation funds, state regulators may be more anxious to prioritize sites. See Stevenson Swanson, Legislators Not Turning Green Yet, July 26, 1993, Chi. Trib., July 26, 1993, at 1 (quoting Illinois EPA Director Mary Gade saying that state EPA will rank tanks according to imminent threat, because treating all sites the same was "impossible").
281 See supra notes 179–84 and accompanying text.
market to cover USTs has disappeared. These state funds are running out of money.

Rather than implement a report-laden cradle-to-grave regulatory system, other regulatory measures might yield better results. Providing a strict liability standard in state statutes for private law plaintiffs, including municipalities, to hold leaking tank owners liable would channel legal efforts toward punishing those offenders who are causing serious harm. Allowing the private insurance market to operate without the artificial floor and ceiling provided by the financial responsibility requirements and state financial responsibility funds would allow owners and their customers to bear the real cost of leaking tanks. A more modest insurance reform would be to incorporate a needs test into state fund reimbursements, to allow these funds to distinguish between large owners and operators capable of self-insurance and small owners more needful of state assistance. Crafting regulations that provide strict clean-up standards for those tank sites that threaten drinking water, and more moderate containment standards for less vulnerable areas, would also better clean the environment with the scarce resources available. Programs to encourage owners to convert from USTs to above-ground tanks should also be considered. These regulations should be adopted and enforced at the most local level feasible, thereby allowing different jurisdictions the opportunity to try different strategies, depending on local conditions.

282 See supra notes 222-24 and accompanying text.

283 A similar reform was suggested in 1982 to enable injured plaintiffs to recover for injuries caused by hazardous waste. See Injuries and Damages from Hazardous Wastes—Analysis and Improvement of Legal Remedies, A Report in Compliance with Section 301(e) of CERCLA by the “Superfund” Section 301(e) Study Group (Part I), No. 97-12, 97th Cong., 2d Sess. 245 (1982).

284 See Italiano, supra note 188, at 216 (“It is questionable public policy for states and EPA to allow payment of public funds to large corporations that have little or no financial need.”). But see Legislature Changes Tank Law to Facilitate Access to Cleanup Funds, CRANS WICHITA Bus. J., June 5, 1992, § 1, at 20 (noting that Kansas’s UST law that required a $100,000 deductible for UST owners capable of self-insurance found unconstitutional).

285 Massachusetts regulations reflect this idea somewhat, by requiring more onerous technical specification for tanks in more sensitive areas. See Mass._regs. Code tit. 527, § 9.05(D)(3) (1993).

286 See W. David McCaskill, ASTs—A Hot Alternative to USTs, MATERIALS PERFORMANCE, Jan. 1993, at 17; Italiano, supra note 188, at 258.