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BANKRUPTCY

Midlantic National Bank v. New Jersey Department of Environmental Protection; O'Neill, Trustee in Bankruptcy of Quanta Resources Corp., Debtor, v. City of New York, 106 S.Ct. 755 (January 17, 1986).

The issue in these two petitions for *certiorari*, which arose out of the same bankruptcy petition, is whether a bankruptcy trustee may abandon property under §554(a) of the Bankruptcy Code, 11 U.S.C. §554(a) (1982), in contravention of state and local public health and safety laws. Section 554(a) reads: "After notice and a hearing, the trustee may abandon any property of the estate that is burdensome to the estate or that is of inconsequential value and benefit to the estate." "Abandonment" is defined as "the release from the debtor's estate of property previously included in that estate." (See dissenting opinion of Justice Rehnquist, 106 S.Ct. at 763, citing 2 W. Norton, Bankruptcy Law and Practice §39.01). The Supreme Court, in a 5-4 decision written by Justice Powell, held that a trustee may not abandon property in contravention of local laws "reasonably designed to protect the public's health or safety from identified hazards." 106 S.Ct. at 762.

Quanta Resources Corporation (Quanta) processed waste oil at two locations, one facility in Long Island City, New York and the other in Edgewater, New Jersey. In June 1981, Midlantic National Bank (Midlantic) provided Quanta with a \$600,000 loan secured by Quanta's inventory, accounts receivable and certain equipment. Also in June 1981, the New Jersey Department of Environmental Protection (NJDEP), which had given Quanta a temporary permit to operate the Edgewater facility, discovered that Quanta had violated its permit by accepting more than 400,000 gallons of oil containing PCBs. As a result, NJDEP ordered Quanta to halt its operations at Edgewater. Negotiations between NJDEP and Quanta concerning the cleanup of the facility commenced soon after the NJDEP order. However, on October 6, 1981, Quanta filed a petition for reorganization under Chapter 11 of the Bankruptcy Code. The next day, NJDEP ordered Quanta to clean up the site, and in November, 1981, Quanta converted its Chapter 11 petition to Chapter 7, liquidation. Thomas O'Neill was appointed as Quanta's trustee in bankruptcy.

An investigation of the Long Island City facility revealed that Quanta had accepted and stored over 70,000 gallons of PCB-contaminated oil in leaky containers. O'Neill notified Quanta's creditors and the Bankruptcy Court for the District of New Jersey that he intended to abandon the Long Island City property pursuant to §554(a) after attempts to sell the property proved unsuccessful. The trustee's allegation that the Long Island City facility was "burdensome" and of "inconsequential value to the estate" within the meaning of §554 was not disputed by any party involved in the bankruptcy proceeding.

Although not parties to the proceeding, the City and State of New York (New York) objected to the abandonment, contending that it would threaten public health and safety and would violate state and federal environmental law. New York based its objection on considerations of "public policy" that pervade local laws and on 28 U.S.C. §959(b) (1982) which requires that a trustee "manage and operate" the property of the estate "according to the requirements of the valid laws of the State in which such property is situated." However, the Bankruptcy Court approved the abandonment and the U.S. District Court for the District of New Jersey affirmed. New York appealed this decision to the Third Circuit.

Upon abandonment, the trustee removed the 24-hour protection service from the Long Island City facility and shut down the fire-suppression system. To protect public health, New York spent \$2.5 million to decontaminate the facility.

On April 23, 1983, shortly after the District Court approved the abandonment of the Long Island City site, the trustee announced his intention to abandon the Edgewater site. On May 20, the Bankruptcy Court approved this abandonment. NJDEP objected to the abandonment "because the estate had sufficient funds to protect the public from dangers posed by the hazardous waste." 106 S.Ct. at 758. Presumably, the abandonment could require New Jersey to make expenditures to decontaminate the Edgewater site.

Pursuant to §405(c)(1)(B) of the Bankruptcy Code, the parties in the New Jersey litigation consented to NJDEP appealing from the Bankruptcy Court to the Third Circuit because the abandonments of the New Jersey and New York sites presented the same issue.

The Third Circuit held that the Bankruptcy Court erred in permitting abandonment. *In re Quanta Resources Corp.*, 739 F.2d 912 (3d Cir. 1984) and *In re Quanta Resources Corp.*, 739 F.2d 927 (3d Cir. 1984). (For a discussion of *Quanta*, 739 F.2d 912, see Vol. 1, No. 2, *Hofstra Environmental Law Digest* (Fall 1984).)

In affirming the Third Circuit's decision, Justice Powell, joined by Justices Brennan, Marshall, Blackmun and Stevens, emphasized three factors prohibiting a trustee from the abandonment of property in contravention of state law designed to protect public health and safety. Justice Powell first examined the trustee's abandonment power prior to the 1978 revisions of the Bankruptcy Code. Prior to 1978, "the trustee's abandonment power had been limited by a judicially developed doctrine intended to protect legitimate state or federal interests." 106 S.Ct. at 759. Justice Powell then concluded that when Congress codified the rule of abandonment in §554, it "also presumably included the established corollary that a trustee could not exercise his abandonment power in violation of certain state and federal laws." *Id.* If Congress intends to change the interpretation of a judicially created concept, it normally makes the intent specific in

the construction of the statute. Because Congress did not specify its intent to change the pre-1978 judicially created abandonment rule, Justice Powell reasoned that Congress intended that the pre-1978 rule be unaffected by the 1978 revisions.

Secondly, Justice Powell noted Congress' determination "that the trustee is not to have *carte blanche* to ignore nonbankruptcy law." *Id.* at 760. In situations where the Bankruptcy Code "has conferred special powers upon the trustee and where there was no common law limitation on that power, Congress has expressly provided that the efforts of the trustee to marshal and distribute the assets of the estate must yield to governmental interest in public health and safety." *Id.* Justice Powell accepted New York's argument that 28 U.S.C. §959(b) "did not intend for the Bankruptcy Code to pre-empt all state laws that otherwise constrain the exercise of a trustee's powers." *Id.* at 762.

Justice Powell found additional support for restricting the trustee's abandoning power "in repeated congressional emphasis on its goal of 'protecting the environment against toxic pollution.'" *Id.* (citation omitted.) The policies of both the Resource Conservation and Recovery Act, 42 U.S.C. §6901 (1982), and the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §9601 (1982), demonstrate Congress' intent to restrain activities involving hazardous waste that may result in "imminent and substantial endangerment to the public health or welfare or environment." 106 S.Ct. at 762 citing 42 U.S.C. §9606. Justice Powell explained "[i]n the face of Congress' undisputed concern over the risks of the improper storage of hazardous and toxic substances, we are unwilling to presume that by enactment of §554(a), Congress implicitly overturned long-standing restrictions on the common law abandonment power." 106 S.Ct. at 762.

The Supreme Court concluded that "[t]he Bankruptcy Court does not have the power to authorize an abandonment without formulating conditions that will adequately protect the public's health and safety." *Id.*

In dissent, Justice Rehnquist, joined by Chief Justice Burger and Justices White and O'Connor, found "particularly unpersuasive" the Court's main argument supporting state power to bar abandonment, namely, that Congress "codified well-recognized restrictions of a trustee's abandonment power." *Id.* at 763 quoting Justice Powell, *Id.* at 759. Justice Rehnquist looked solely at the language of §554 and concluded that it "is limited only by considerations of the property's value to the estate. It makes no mention of other factors to be balanced or weighed and permits no easy inference that Congress was concerned about state environmental regulations." *Id.* at 763-64.

Justice Rehnquist noted that many of the sections of the Bankruptcy Code have explicit exceptions to them and that §554(a) is not one of them. Therefore, New York's argument that 28 U.S.C. §959(b) creates an implicit exception to §554(a) of the Bankruptcy Code should be rejected. Justice Rehnquist concluded that the "Court errs by permitting [the States] to impose conditions on the abandonment power that Congress never contemplated." *Id.* at 768.

Steven Sonkin, '86

WETLANDS

United States v. Riverside Bayview Homes, Inc., 106 S.Ct. 455 (December 4, 1985).

A recent Supreme Court decision expanded the definition of "wetlands" under the Federal Water Pollution Control Act, 33 U.S.C. §1251 (1982) (the Clean Water Act). The initial enactment defined "freshwater wetlands" as areas that are periodically inundated and covered by vegetation. 33 C.F.R. §209.120(d)(2)(h) (1976). "Periodically" was eliminated from the definition in 1977. In 1982, the present, almost identical, regulation was promulgated which states that a wetland is an area that is "inundated or saturated by surface or groundwater at a frequency and duration sufficient to support . . . a prevalence of vegetation." 33 C.F.R. §323.2(c) (1978).

Section 1311 of the Act forbids the discharge of fill material into navigable water unless authorized by the Army Corps of Engineering through the issuance of a permit. It is the nation's navigable waters with which the Act is concerned and it defines the term as the "waters of the United States." 33 U.S.C. §1362(7) (1982). In 1976, the Corps' Regulation of the "waters of the United States" was expanded to include all "fresh water wetlands" that were adjacent to other waters covered by the Clean Water Act, waters actually navigable, as well as tributaries of such waters and non-navigable intrastate waters whose use or misuse could affect interstate commerce. 40 Fed. Reg. 31320 (1975).

In the present case, defendant, Riverside Bayview Homes, Inc. owned 80 acres of low-lying marshland near the shores of Lake St. Clair in Macomb County, Michigan. In 1976, defendant began to place fill material on its property without a permit. The Corps, seeking to enjoin defendant's filling, filed suit in the United States District Court for the Eastern District of Michigan.

The District Court granted the injunction, finding that the property was an adjacent wetland as per the 1975 regulations which requires a permit for filling. Following defendant's appeal, the Court of Appeals remanded for consideration of the intervening 1977 amendments to the regulation. 615 F.2d 1363 (6th Cir. 1980). Upon remand, the District Court again found that the property was a wetland subject to the Corps' authority.

Following a second appeal, the Sixth Circuit reversed the finding that the defendant's property fell within the regulation. 729 F.2d 391 (6th Cir. 1984). The court declared that the Corps' definition of adjacent wetland under the regulations excluded wetlands that were not subject to flooding by adjacent navigable waters. The court limited the breadth of the regulation for fear that a broad reading of the regulation and a broad definition of wetland would result in the taking of private property without just compensation in violation of the Fifth Amendment. The court also doubted whether Congress intended to allow regulation of wetlands that were not the result of the flooding of navigable waters.

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Justice White, writing for a unanimous Supreme Court, began his analysis of the case by determining whether the Court of Appeals was correct in narrowly construing the regulation to avoid a taking. The Court has previously held that governmental land-use regulations may amount to a taking in the extreme case that "the ordinance does not substantially advance legitimate state interests . . . or denies an owner economically viable use of his land." *Agins v. Tiburon*, 447 U.S. 255, 260, 100 S.Ct. 2138, 2141 (1980). The requirement that a permit be obtained before the use of a person's property is not in itself a taking of that property. A permit system implies that permission may be granted, and even if it is not, there are other economically viable uses for the land. Only when a permit is denied and the land cannot be put to another economically viable use will a taking occur.

As long as compensation is available to those whose property is taken, the governmental action is not a taking. The Court declared that "the possibility that the application of a regulatory program may in some instances result in [a] taking . . . is no justification for the use of narrowing constructions to curtail the program if compensation will . . . be available in those cases where a taking has occurred." *Riverside*, 106 S.Ct. at 460. Because the Tucker Act, 28 U.S.C. §1491 (1982), which supplies a means of compensation for federal takings, was available here, the Court declared that the Court of Appeal's fear that the permit program would result in a taking did not justify its adoption of a limited view of the Corps' authority.

The next issue raised by the Court was whether the regulations in question required the defendant to obtain a permit before filling. Under the regulations, the Corps' authority under §404 of the Clean Water Act, 33 U.S.C. §1344, was extended to all wetlands adjacent to navigable or interstate waters and their tributaries. The Supreme Court found that the Court of Appeals was incorrect in declaring that periodic flooding by an adjacent body of water is needed. "Indeed, the regulation could hardly state more clearly that saturation by either surface or ground water is sufficient . . .," provided it supports vegetation. *Riverside*, 106 S.Ct. at 460. No requirement of inundation exists in the regulation. In fact, the interim final regulation of 1975 included a requirement of "periodic inundation" which was deleted from the regulation as it was finally enacted. 33 C.F.R. §209.120(d)(2)(h) (1976). The Court of Appeals "improperly reintroduced into the regulation precisely what the Corps had excised." *Riverside*, 106 S.Ct. at 461.

The Supreme Court concluded that the defendant's property fit within the definition of an adjacent wetland. The property is located adjacent to a body of navigable water and is characterized by the presence of vegetation that requires saturated soil conditions. Therefore, the defendant's property is a wetland adjacent to a navigable waterway and, is part of the "waters of the United States." *Id.* 33 C.F.R. §323.2 (1985).

The Court then inquired whether it was reasonable (review of the issue is limited to a determination of reasonableness) considering the Corps' power to regulate discharge under the Act, for it to exercise jurisdiction over wetlands adjacent to, but not regularly flooded by, "normal waters," e.g. rivers and streams.

Central to the issue concerning the Corps' reasonableness in regulating under the Act, is the determination as to whether they were correct in choosing the point at which "water" begins and land ends. If adjacent wetlands are not waters, then they are not regulated under the Act. Although this is a difficult task, the Court found that both the legislative history of the regulations and the underlying policies of its statutory grants of authority support the "reasonableness of the Corps' approach of defining

adjacent wetlands as 'waters' within the meaning of §404(a)." *Riverside*, 106 S.Ct. at 462.

Section 404, which originated as part of the Federal Water Pollution Control Act Amendment of 1972, was an attempt to "restore and maintain the chemical, physical, and biological integrity [i.e., conditions to which the natural structure and function of ecosystems are maintained. H.R. Rep. IV. 92-911, p. 76 (1972)] of the Nation's waters." C.W.A. §101, 33 U.S.C. §1251. Congress recognized that protection of the aquatic ecosystems required broad federal authority and as such defined "waters" very broadly. *Riverside*, 106 S.Ct. at 462. The definition of "navigable waters" as "waters of the United States" makes it clear that the term navigable is of limited importance and should not be used to limit the scope of the Act. "[T]he evident breadth of congressional concern for protection of water quality and aquatic ecosystems suggests that it is reasonable for the Corps to interpret the term 'waters' to encompass wetlands adjacent to waters as more conventionally defined." *Id.*

Because of the hydrologic motion of water and the inseparable connection between waters and their adjacent wetlands, such wetlands play a key role in protecting and enhancing water quality. 42 Fed. Reg. 37128 (1977). The Court deferred to the Corps' and the Environmental Protection Agency's technical expertise to find that there was nothing unreasonable in determining that adjacent wetlands, even those which are not flooded by adjacent waters, may be defined as "waters" under the Act. *Riverside*, 106 S.Ct. at 463.

As further proof of the Corps' reasonableness, the scope of the Corps' asserted jurisdiction over wetlands was specifically brought to Congress' attention and Congress rejected measures designed to curb the Corps' jurisdiction for fear that such a limitation would threaten the wetlands. *Id.* at 464. In the Clean Water Act, 33 U.S.C. §1344(g)(1), Congress provided that the states would not be allowed to supersede the Corps' jurisdiction "to regulate discharges into actually navigable waters and waters subject to the ebb and flow of the tide, 'including wetlands adjacent thereto.'" *Riverside*, 106 S.Ct. at 465.

The Court held that the Corps acted reasonably in interpreting the Act to require permits for the filling of adjacent wetlands. As such, the defendant, because its property is part of a wetland adjacent to a navigable waterway, was required to obtain a permit before it filled its land.

Richard Friedman, '86

SEPARATION OF POWER

Environmental Defense Fund v. Thomas, __F.Supp.__ (D.D.C. January 28, 1986) (85-1747).

The issue of separation of power among federal agencies was addressed by a United States District Court for the District of Columbia. Plaintiffs, Environmental Defense Fund (EDF), *et al.*, brought suit against the Environmental Protection Agency (EPA) and the Office of Management and Budget (OMB) for EPA's failure to issue regulations within a deadline mandated by Congress under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C.A. §6924 (1984), concerning permitting for underground storage tanks of hazardous waste. Plaintiffs contended that EPA's failure to issue the regulations within the congressional deadline was a violation of RCRA and the Administrative Procedure Act (APA), 5 U.S.C. §796 (1982).

Plaintiffs sought an order requiring EPA to promulgate the regulations by April 25, 1986. Plaintiffs further contended that ability to issue the regulations was prevented by the unlawful interference of OMB and sought injunctive relief against OMB to prevent such interference in the future.

Defendants sought June 30, 1986 as the deadline for regulations and further contended that the court had no jurisdiction to grant the requested relief against OMB.

All parties agreed that the court had jurisdiction pursuant to RCRA to set a date by which EPA must issue the congressionally mandated regulations. The dispute was whether this court had jurisdiction to grant injunctive relief against OMB. At the heart of this dispute was OMB's activity with respect to the congressional deadline and pursuant to Executive Order 12291, 46 Fed. Reg. 13193 (Feb. 17, 1981), 3 C.F.R. 127 (1982) (EO 12291).

EO 12291 directs executive agencies to submit all proposed and final regulations to OMB prior to publication to determine if they are consistent with certain cost-benefit criteria. OMB may also extend indefinitely its review of any rules pursuant to EO 12291 Section 3(f). OMB's authority is qualified by sections 8(a)(2) of EO 12291 exempting regulations where OMB review would cause failure to meet statutory or judicial deadlines; 3(f)(3), which states that nothing in this subsection shall be construed as displacing the agencies' responsibilities delegated by law; and 2, 3(a) and 6(a) which states that OMB may exercise its review only to the extent permitted by law.

Plaintiffs argued that OMB's interference with the promulgation of the EPA regulations violated both RCRA and the APA and that the court had inherent equitable relief powers under 28 U.S.C. §1331 and §1336 (1982). Defendants responded that granting injunctive relief against OMB to prevent OMB from reviewing proposed regulations when such review would delay promulgation beyond a statutory deadline is unjustifiable and inappropriate and that neither RCRA, the APA nor EO 12291 gave the court jurisdiction in this matter.

U.S. District Judge Thomas A. Flannery began the court's analysis by investigating OMB's involvement in the regulation process. Congress set March 1, 1985 as the deadline for the promulgation of the hazardous waste permits under RCRA. OMB began its review of the proposed standards on March 4, 1985 and notified EPA that it was extending its review on March 25, 1985. By April 16th, it became clear that OMB and EPA had significant differences as to the proposed regulations. OMB favored containing only those hazardous waste leaks that can be demonstrated by risk analysis to threaten harm to human health, while EPA sought to contain all leaks of waste disposal. After further negotiations and conferences between the two agencies the proposed regulations were published in the Federal Register on June 26, 1985. 50 Fed.Reg.26444 (1985).

Judge Flannery next addressed the date by which the EPA would have to issue the final regulations. Plaintiffs contended that April 25, 1986 was a reasonable date while defendants argued that their schedule justified a June 30, 1986 deadline. Judge Flannery found that the promulgation of regulations 10 months after the congressional deadline was "highly irresponsible" but nevertheless ruled that the June 30th deadline was reasonable because the EPA had demonstrated through affidavits that it was "proceeding in good faith." F.Supp. _____. The court warned that failure to meet the June 30th deadline would merit stringent equitable punishment.

The court found that OMB, by insisting on substantive changes in the proposed regulations, contributed to the delay in the promulgation of EPA's regulations. Although some deference must be accorded the President to supervise executive policy-

making, EO 12291 raises constitutional concerns when this power is used to create delays and impose substantive changes. By withholding approval until EPA accepted substantive changes in the proposed regulations, the court found that OMB, through improper use of EO 12291, was encroaching on the independence and expertise of Congress.

OMB's improper use of EO 12291 to circumvent congressional will was held to be an invalid exercise of the President's Article II powers. To support its conclusion that EO 12291 necessarily must be construed narrowly and that EO 12291 cannot delay a statutory or judicial deadline, the court cited the 1981 congressional testimony of OMB Director Miller, then Administrator of OMB's Office of Information and Regulations Affairs. Mr. Miller testified: "... If a statute or a court order establishes a date for rulemaking action, the Executive Order 12291 cannot delay that action." —F.Supp.____, citing testimony of James C. Miller III, in *Role of OMB Regulation: Hearing Before the Subcommittee on Oversight and Investigation of the House Committee on Energy and Commerce, 97th Cong. 1st Sess. 46, 1981*. The court concluded that the President's exercise of supervisory powers must conform to legislation enacted by Congress and may not transgress boundaries set by Congress.

Concerning equitable relief appropriate to this case, the court held that enjoining OMB from further interaction with the EPA would be an unwarranted intrusion into discretionary executive consultations. The court declared that it would be "unreasonable and unacceptable" if the June 30 deadline was not met. Therefore, OMB was enjoined from further review if such review was going to delay EPA from meeting the June 30 deadline.

Plaintiffs sought further equitable relief because they feared that OMB would continue to ignore the limitations found in section 8(a)(2) of EO 12291, and delay promulgation of EPA regulations beyond statutory deadlines. The court noted that of the past 169 EPA regulations subject to a statutory or judicial deadline, OMB had extended review on 86 occasions resulting in an average delay per regulation of 91 days. The delays have caused concern in Congress because through EO 12291, OMB has forced EPA not to comply with statutorily mandated timetables in RCRA and other environmental legislation.

The court declared that OMB had no authority to use its review power under EO 12291 to force the delay of the promulgations of regulations pursuant to the statutorily mandated deadlines set out in the 1984 RCRA amendments. Providing declaratory relief in this case "is necessary to ensure compliance with the clearly expressed will of Congress." —F.Supp.____

Martin de Porres Cargas, '86

NUCLEAR WASTE

Silkwood v. Kerr-McGee Corp., 769 F.2d 1451 (10th Cir. July 31, 1985)

This diversity action, before the 10th Circuit Court of Appeals for the second time, was initially brought by plaintiff Bill Silkwood as administrator of the estate of Karen Silkwood, against defendants Kerr-McGee Corporation and Kerr-McGee Nuclear Corporation. *Silkwood v. Kerr-McGee Corp.*, 485 F.Supp. 566 (W.D. Okla. 1979). Plaintiff sought recovery for bodily injury and property damage resulting from plutonium contamination. The jury awarded the plaintiff \$500,000 for personal injury, \$5,000 for property damage, and \$10,000,000 in punitive damages. On appeal, the 10th Circuit (consisting of the

same three judge panel which decided this case in an earlier appeal) reversed both the personal injury judgment on the grounds it was precluded by the Oklahoma Workers' Compensation Act, Okla. Stat. Ann. tit. 85 (West 1971 & Supp. 1980), and the punitive damages judgment, holding that state tort law punitive damages concerning nuclear facilities were preempted by federal statutory regulation. *Silkwood v. Kerr-McGee Corp.*, 677 F.2d 908 (10th Cir. 1981). Plaintiff appealed the reversal of the punitive damages judgment to the U.S. Supreme Court, which held that the award of punitive damages was not preempted and remanded the case to the 10th Circuit to allow the defendants to assert previously made claims that had not yet been addressed by the 10th Circuit. *Silkwood v. Kerr-McGee Corp.*, ___ U.S. ___, 104 S.Ct. 615 (1984). (See Vol. 1, No. 1 *Hofstra Environmental Law Digest* (Spring 1984) for a discussion of *Silkwood*.)

In this case, defendants argued for judgment notwithstanding the verdict on the punitive damages award alleging that there was no evidence that malicious conduct resulted in the property damage, and that substantial compliance with the federal regulations precluded recovery of punitive damages. Alternatively, defendants asserted that the punitive damages judgment should be remanded to the District Court for a new trial because: (1) evidence of the plaintiff's physical injury prejudiced the jury's award, since punitive damages should be solely based upon evidence supporting the property damage claim; (2) the jury instructions should have taken into account the effect of federal regulatory compliance; (3) the amount of the punitive damages judgment was excessive as a matter of law in relation to both the actual harm and the cause of the harm; (4) the trial was prejudiced by anti-nuclear publicity, the misconduct of the plaintiff's counsel, and prejudicial rulings by the trial court.

Circuit Judge McKay held that the evidence was sufficient to support an award of punitive damages. Oklahoma law allows punitives for any tort action, not arising from contract, where the defendant is guilty of malice. Malice may be inferred by gross negligence indicated by a reckless disregard for the safety of others. In this diversity case, the court applied federal law with respect to the sufficiency of the evidence. The federal standard justifies a directed verdict only if reasonable minds can not differ as to the conclusions drawn from the evidence and its inferences. Judge McKay held there to be sufficient evidence for a jury to find that the defendants acted with reckless disregard and that the defendants' conduct caused the property damage.

The court also declined to grant judgment notwithstanding the verdict thereby rejecting defendants' theory of substantial compliance with federal regulations. The defendants argued that substantial compliance preempts any state authorized punitives and even if there is no federal preemption, substantial compliance precludes punitives as a matter of Oklahoma state law. The court held that:

[w]hile it is true that the Supreme Court did not explicitly find that, as a matter of federal preemption, punitive damages *may* be awarded even if Kerr-McGee substantially complied with the federal regulatory scheme, for us to find that they *may not* would be inconsistent with the principles implicit in the [Supreme] Court's opinion.

769 F.2d at 1456 (emphasis in original).

As to whether Oklahoma law itself would preclude punitives when there was substantial compliance, the court found this to be an open question. However, the court's analysis led to the conclusion that the Oklahoma Supreme Court would not bar punitives since Oklahoma case law suggests that compliance with statutory requirements does not immunize a party from negligence. *Transport Indemnity Co. v. Page*, 406 P.2d 980, 985 (Okla. 1965).

The court's analysis proceeded to the defendants' appeal for a new trial on the punitive damages judgment. The court held for the defendants on this issue and remanded the case to the district court for a new trial. The rationale was based on the court's holding on the initial appeal which reversed the personal injury judgment. *Silkwood*, 667 F.2d 908 (10th Cir. 1981). Because the Oklahoma Workers' Compensation Act, *supra*, precluded the personal injury claim, the court had to decide if a punitive damages action could be based upon a covered personal injury. Section 12 of the Act provides that the employer liability "shall be exclusive and in place of all other liability of the employer . . . , at common law or otherwise, for such injury." Okla. Stat. Ann. tit. 85 (West 1971 & Supp. 1980). The defendants argued that the Act provides an *exclusive* remedy and thus is a complete evidentiary bar. Conversely, plaintiff contended that the Act in no way restricted the use of evidence of a covered personal injury as the basis for a punitive damages award, but only prescribed compensation for an award of actual damages.

In the absence of legislative intent, the court adopted an interpretation of the Act between the two parties' positions. The court reasoned that the defendants' position:

would work a substantial hardship on potential plaintiffs whose rights were not intended to be affected by the Act. For example, an evidentiary bar would preclude a non-employee who was injured by defendant employer's negligent act from introducing evidence of past similar injuries to employees, which would be otherwise admissible under Oklahoma law in order to demonstrate the knowledge and malice of the defendant for purposes of a punitive damages determination.

Id. Additionally, the defendants' position would result in precluding recovery for non-covered injuries which may need evidence of the covered injury to prove an element of the non-covered injury claim, as in the present case. However, the plaintiff's proposed interpretation went against the plain meaning of the Act, which was to be the sole source of authority and thus may not be the basis of damages of any kind, actual or punitive. Thus, evidence of a covered injury is admissible to prove an element of a non-covered injury but its use must be restricted by a limiting jury instruction.

Plaintiff argued that punitives are a special type of non-covered claim, and when based upon a non-covered property injury, there is no need for a limiting instruction as there is no potential for prejudice. Plaintiff argued there is no prejudice because the criteria for punitives is not plaintiff's injury, rather it is the endangerment to society created by defendants' negligent conduct and the punishment appropriate to deter such conduct. This argument required the court to determine the criteria Oklahoma permits the jury to use to measure the amount of punitives. The court found that the punitive damages award must bear some relation to the cause and extent of plaintiff's non-covered injury, i.e. the property damage. Because the trial court instructed the jury to consider the injuries inflicted when determining punitives, without restricting the jury's consideration to the property damage claim, the court found that part of the punitive damages judgment was based upon plaintiff's subsequently precluded personal injury claim. Thus, the punitive damages judgment was in violation of the Oklahoma Workers' Compensation Act and the issue was remanded for a new trial.

Circuit Judge Doyle, while agreeing that the defendants should not be granted a judgment notwithstanding the verdict, strongly dissented against the majority's decision to remand. (Judge Doyle dissented in this court's reversal of the punitive damages award in the first appeal). *Silkwood*, 667 F.2d 908 (10th Cir. 1981). Judge Doyle rejected the majority's interpretation of Oklahoma law,

stating that "Oklahoma law requires that[punitive damages be] in proportion to the culpability of defendant's conduct, and to the defendant's wealth, rather than to any actual damages awarded." 769 F.2d at 1466.

Judge Doyle also rejected the majority's interpretation of the Oklahoma Workers' Compensation Act. He found that the Act was meant to be an exclusive remedy to *compensate* workers for covered injuries. He then reasoned that an award of punitive damages did not violate the Act because they were not compensatory and the evidence of the covered personal injury was admissible to determine if the requisite culpability for punitives exists.

Thomas Sheehan, '87

PREDACIDES

National Cattlemen's Association v. United States E.P.A., 773 F.2d 268 (10th Cir. Sept. 19, 1985).

Compound 1080, a colorless, odorless, tasteless, deadly poison, was re-registered with restrictions by the U.S. Environmental Protection Agency (EPA) in 1982, after having been banned from use as a predacide for 10 years. In order to re-register a cancelled predacide, an applicant must show the existence of "substantial new evidence which may materially affect the prior cancellation or suspension order and which was not available to the Administrator at the time he made his final cancellation or suspension determination." 773 F.2d at 269 (citing 40 C.F.R. §164.131(a) (1984)).

The principal issue in this petition for review of an EPA final decision is whether the administrative law judge (ALJ) and the EPA Administrator erred in their assessment of the evidence presented upon re-registering the predacide, or in establishing the restrictions upon its use.

Three methods of Compound 1080 use were considered by the ALJ and EPA. Before 1972, Compound 1080 was used primarily in large bait stations to control predation on livestock. The method involved injecting a horse or sheep carcass with the poison and setting the carcass out as food during the winter. Two new methods of Compound 1080 delivery have been developed since 1972. One method uses bite-size pieces of meat containing the predacide, known as single lethal dose (SLD) baits. The other method involves the use of toxic collars. Protected livestock wear a rubber collar containing Compound 1080 which when pierced, presumably by coyotes, emits a lethal dose of the poison.

The ALJ and EPA Administrator both held that the ban on large bait stations should be continued because the danger posed to non-target wildlife feeding on the carcass is too great. However, both the SLD baits and toxic collars were found not to pose a serious threat to the environment. The ALJ required that all Compound 1080 uses be initially supervised by a federal agency. The collars could be filled and distributed only by registered users but, once certified, a rancher could personally supervise the use of toxic collars. The EPA Administrator affirmed this decision, but imposed additional usage and labelling restrictions.

With regard to the SLD baits, the ALJ found that stringent limitations were necessary. SLD baits could be prepared, distributed and used only by federal and state employees who had been certified. In addition, the ALJ restricted the placement of SLDs and required strict recordkeeping. The EPA Administrator again affirmed the ALJ but with additional requirements, namely sole federal control over the certification process and additional

testing under experimental use permits prior to actual registration.

This matter is a consolidation of two cases. In the first case, National Cattlemen's Association appealed, claiming that the ban on large bait stations was improper and that the restrictions placed upon SLD baits and toxic collars were contrary to the evidence and the law. In the second case, *Defenders of Wildlife v. Ruckelshaus*, Defenders of Wildlife appealed, asserting that Compound 1080 should remain totally banned.

Writing for the Tenth Circuit, Judge McKay indicated that he would give great weight to the EPA's decision because "when questions involve a special expertise of an agency, such as in detailed scientific proceedings, the agency deserves special deference from the courts, although careful review is always required." 773 F.2d at 271 (quoting *Environmental Defense Fund, Inc. v. EPA*, 548 F.2d 998, 1252 (D.C. Cir. 1976)). Therefore, the court affirmed the restrictions placed upon the use of Compound 1080 in SLD baits and toxic collars.

Thus, the court rejected the assertion by Defenders of Wildlife and found that the lift on the total ban is supported by substantial new evidence as that term has been set forth above. The court noted that substantial evidence "means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." 773 F.2d at 271 (citation omitted). Since both SLD baits and toxic collars were developed after the moratorium on Compound 1080 took effect, the evidence is considered new. Therefore, despite evidence in the record tending to show SLD baits as ineffective and dangerous to non-target wildlife, the court concluded that the substantial new evidence criteria was met based upon a test program in British Columbia during 1982-83. Consequently, the court affirmed the EPA's decision. Likewise, toxic collars were approved despite the fact that predators and/or non-target wildlife feeding from the victims may be poisoned or that the collar "could pose a danger to the environment if abused or negligently handled." *Id.*

The court dismissed the argument by the National Cattlemen's Association that it is inconsistent to allow ranchers to supervise use of toxic collars but not SLD baits. The court noted that "it would be extremely difficult to prevent the unauthorized use of 1080 in illegal delivery methods should private individuals be licensed to prepare and administer the SLDs." *Id.* at 272. The court concluded that, based upon the record as a whole, the EPA's decision is reasonable and supported by substantial new evidence. Additionally, in a footnote, the court bound the EPA to a representation made at oral argument that local government "state employees" may be permitted to administer SLD baits.

On the issue of certification, the court rejected the EPA Administrator's requirement that a federal agency determine the competency of and certify all users of SLD baits. Judge McKay based the decision on the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. §136b(a)(2) (1982) (FIFRA), which provides in part that states may submit plans for certification. The court held that the EPA Administrator may only reject a state's plans "if those plans do not provide adequate assurance of compliance with the EPA's requirements." 773 F.2d at 272. Thus, the EPA may not issue an outright rejection of state plans before submission, despite evidence presented to the Administrator documenting widespread abuse by states. Regarding the issuance of experimental use permits, in accordance with section 136c(f) of FIFRA, the court found that the administrator may reject plans so long as the rejection is not arbitrary and capricious. Finally, the court found the remainder of the EPA's restrictions on toxic collars and SLD baits to be within the standards set by law. 773 F.2d at 272-73.

(Author's Note: Both Defenders of Wildlife and the proponents of Compound 1080 use in large bait stations have indicated that they will not appeal the Tenth Circuit's decision. *Defenders*, Jan.-Feb. 1986, at 43.)

Marliese Flis, '87

HAZARDOUS WASTE

United States v. Mirabile, 15 ELR 20994 (E.D.Pa. Sept. 4, 1985)

In September 1985, United States District Judge Newcomer of the Eastern District of Pennsylvania ruled on several motions for summary judgment regarding the potential liability of secured creditors for response costs incurred by the United States in cleaning up a hazardous waste site. Determining the circumstances under which secured creditors can be held liable under §107 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §9607 (1985), was an issue of first impression. (Section 107 allows the government to recover its cleanup costs from the site's owners or operators.)

This case involved several parties, including three secured creditors, present and prior owners of the site and the United States. Turco Coatings, Inc. (Turco), a prior owner of the Phoenixville, Pennsylvania paint manufacturing site, which became a hazardous waste site, is no longer in business. The current owners, Anna and Thomas Mirabile (Mirabile), once sued by the U.S. under CERCLA, joined two banks, who were secured creditors of Turco, "... contend[ing] that by virtue of certain actions taken during the course of their financial dealings with Turco, [the banks] ... became liable for the creation of the hazardous conditions at the site." 15 ELR at 20995. These banks, American Bank and Trust Company (ABT) and Mellon Bank East National Association (Mellon), counterclaimed against the United States "... relying on the alleged involvement of the Small Business Administration [(SBA)] [which was also a secured creditor] in creating the conditions existing at the site." *Id.* ABT and Mellon joined SBA for indemnification purposes because they felt that if they were liable "then the SBA's activities provide an equally, if not more, compelling basis for liability." *Id.* All three secured creditors filed motions for summary judgment, claiming that a secured creditor's control over a debtor should not bring that creditor within the scope of CERCLA liability.

The question of Mirabile's ownership was not presented in these motions. The current owners are clearly within the statutory definition of "owner or operator" as found in §101(20)(A) of CERCLA, 42 U.S.C. §9601(20)(A). That section contains an exemption from liability for cleanup costs for "... a person, who, without participating in the management of a vessel or facility, holds indicia of ownership primarily to protect his security interest in the vessel or facility." *Id.* The court's role was to examine the circumstances surrounding each secured creditor's connection with the site and to determine whether that creditor was an "owner or operator" within the meaning of the statute. If a "secured creditor does ... become overly entangled in the affairs of the actual owner or operator of a facility, the creditor may ... be held liable for cleanup costs." 15 ELR at 20995.

The court's determination centered on the measure of site control of each of the creditors. The court must define "... the point at which [the secured creditors'] participation [in the site

owner's corporate affairs] is too attenuated to permit the imposition of liability." *Id.* Each of the creditors obviously had a financial interest in Turco and in Mr. and Mrs. Mirabile, but the overriding question was whether the creditors participated in the "... nuts-and-bolts, day-to-day production aspects of the business." *Id.*

ABT was connected with the site in several capacities over the years. Initially, it made a secured loan to Mangels, which was the site owner prior to Turco. Turco then took over Mangels by stock acquisition. In 1980, Turco petitioned for bankruptcy and ceased its operations. When the Bankruptcy Court dismissed Turco's petition, ABT foreclosed on the site and proceeded to successfully bid for it at the sheriff's sale. ABT then assigned its bid to the current owners, Mirabile. ABT's loan was secured by a mortgage on the site throughout these ownership transfers. During the time between its successful bid and the transfer of that bid to Mirabile, ABT took steps to secure the building on the site and estimate the cost of the site's cleanup.

Mellon's connection with the site began when it acquired interest in a secured financing agreement between Girard Bank and Turco. Security for the loan was provided by the assets and inventory of Turco. When Turco's President established an Advisory Board to oversee its operations a Girard loan officer was among its members. Later, with the permission of Turco and the Bankruptcy Court, Girard took control of, and liquidated Turco's inventory.

The SBA, as an agency of the federal government, made a \$150,000 loan to Turco in 1979. Turco provided a second lien security interest in machinery and equipment, a second lien on inventory and accounts receivable, as well as a second mortgage on the real estate.

"The SBA also required a pledge of stock to secure its loan. SBA regulations in effect at the time of this loan required that the SBA provided [sic] management assistance to its borrowers. No evidence [was] ... adduced to suggest that any such assistance was ever provided; however, SBA representatives visited the site three times during 1981 to monitor liquidation of assets."

Id., at 20996.

Addressing the summary judgment motions the court judged each of the three creditors on their individual actions. ABT's motion was granted. The court found that ABT's "... actions with respect to the foreclosure were plainly undertaken in an effort to protect its security interest in the property. ABT made no effort to continue Turco's operations on the property." *Id.* The statutory exemption was found to be directly applicable to ABT because the bank never took part in any operational functions at the site.

The court declined to grant Mellon's motion. The judge stated that "[b]ecause resolution of this motion requires a more finely tuned determination of the sort of participation in management which will lead to an imposition of CERCLA liability, I believe a full development of the factual record at trial is preferable." *Id.* at 20997. Specifically, the court wanted an in-depth determination of the scope and extent of Girard's loan officers' alleged activities in the manufacturing processes.

SBA's motion was granted. The court observed that SBA's case was convincing since it never had any legal or equitable title to the site. The judge "... did not believe participation in purely financial aspects of operation ... is sufficient to bring a lender within the scope of CERCLA liability." *Id.* The SBA regulations which required the agency to be active in the day-to-day management of the company were ignored. As a partial result of its failure to comply with its own regulations the SBA was able to avoid potential liability.

Richard Horowitz, '87

United States v. Pacific Hide & Fur Depot, Inc., 768 F.2d 1096 (9th Cir. Aug. 15, 1985).

The convictions against individual and corporate defendants, William Knick and Pacific Hide & Fur Depot, Inc. for disposing of electrical transformers containing polychlorinated biphenyls (PCBs) in violation of the Toxic Substances Control Act (TSCA), 15 U.S.C. §2601 (1982), were reversed by the Ninth Circuit based on improper jury instructions concerning the doctrine of deliberate avoidance. The court held that the instructions were improper because the government failed to introduce sufficient evidence that the defendants purposely contrived to avoid learning whether the equipment they disposed of contained illegal concentrations of PCBs.

In 1979, Pacific Hide, owner and operator of scrap metal salvage yards in the Pacific Northwest, purchased a site in Pocatello, Idaho. Upon the discovery by the U.S. Environmental Protection Agency (EPA), in 1980, of electrical transformers containing PCBs at a number of salvage yards owned by Pacific Hide, the corporation signed a consent decree with the EPA and sent instructions to yard managers prohibiting the receipt of transformers containing PCBs.

EPA commenced the present investigation when a Pacific Hide employee at the Pocatello site, where Knick was manager, filed a report with the EPA concerning the drainage and disposal of transformers. The employee reported that "he had gathered several 'black boxes' from various locations around the yard and buried them . . . in a particular spot, all at Knick's direction." 768 F.2d at 1097. The black boxes were capacitors, a device used in electrical transmission that contained a liquid with a concentration of PCBs in excess of the statutorily defined maximum of 50 parts per million (PPM).

When EPA investigators visited the Pocatello site they saw in plain view, hundreds of black boxes scattered throughout the yard. The majority of the boxes had been received not by Pacific Hide, but from Idaho Power, the prior owner of the site. Neither the investigation, nor proof at trial disclosed that any of the capacitors had been transported to the site by Pacific Hide.

The primary purpose of TSCA, enacted by Congress in 1976, is to regulate the manufacture, processing, distribution, use and disposal "of chemical substances and mixtures which present an unreasonable risk of injury to health or the environment." 15

U.S.C. §2601(b) (1982). Criminal sanctions may be imposed under the Act where there is proof of knowing or willful violations of the regulations. 15 U.S.C. §§2614, 2615(b) (1982). The principal issue was whether the defendants knew the characteristics of the black boxes or avoided knowing that the boxes contained PCBs. With regard to intent, the jury was given the deliberate avoidance or so-called *Jewell* instruction:

[Y]ou may find that any particular defendant acted knowingly if you find beyond a reasonable doubt that the defendant was aware of a high probability that the capacitors contained PCBs in concentrations over 50 parts per million and deliberately avoided learning the truth. You may not find such knowledge, however, if you find that the defendant actually believed that the capacitors or transformers contained PCBs in concentrations of 50 PPM, or less, or if you find that the defendant was simply careless.

768 F.2d at 1098.

Following a jury trial, defendants William Knick and Pacific Hide were convicted for TSCA violations. On appeal to the Ninth Circuit, in an opinion written by Judge Kennedy, the convictions were reversed on the ground that it was improper to instruct the jury on the doctrine of deliberate avoidance.

The court noted that a jury may be instructed on deliberate avoidance only where the defendant denies knowledge and the government introduces proof "which supports an inference of deliberate avoidance." *Id.*, at 1098. "It is not enough that the defendant was mistaken, recklessly disregarded the truth, or negligently failed to inquire." *Id.*

The court found that the government presented insufficient proof of deliberate avoidance on the part of defendants to warrant a *Jewell* instruction. At trial the government offered no evidence to show that defendants deliberately avoided learning the true nature of the liquid inside the black boxes in order to have a defense in the event of a subsequent prosecution. The court found that there was no evidence to demonstrate that Knick knew what capacitors were or what they contained. Knick's ignorance on this matter was demonstrated by the fact that he allowed the capacitors to be in plain view of the EPA investigators even though many of the boxes were leaking liquid that investigators would recognize as containing PCBs. The court found that this evidence could not support an inference that defendants were aware of a high probability that the capacitors contained concentrations of PCBs.

Ruth Hansell, '87

The Environmental Protection Agency's (EPA) Use of Settlement as an Alternative Dispute Resolution Method: An Everchanging EPA Policy

I. INTRODUCTION

The EPA's settlement policy in the hazardous waste area has been continuously changing since the enactment of the Comprehensive Environmental Recovery, Conservation and Liability Act (CERCLA), 42 U.S.C. §9601 (1985). The trend has been a steady movement away from an inflexible, non-negotiable 100% cleanup cost payment requirement through an 80% standard to a current "substantial" standard.¹ This more aggressive settlement policy means that they will negotiate with Potentially Responsible Parties (PRPs) even if their contributions will not add up to 80% of cleanup costs as long as their joint contributions will pay a "substantial portion" of the costs.² For

the first time, they will consider paying the remainder of the cleanup costs out of the "Superfund" itself. The EPA will even take a more liberal posture in providing certain releases from future liabilities to settlers and possibly even take steps to protect future liability from nonsettling contributors who are later sued by the government for cleanup costs.³ This policy change is of major importance as non-release of liability was a significant obstacle to settlements as PRPs felt they were not achieving any finality in their settlements. The settlement guidelines state, however, that all settlement agreements must contain a "reopener" clause to take care of serious but previously unknown conditions that emerge at a site as well as previously unknown

scientific information that develops about known conditions.⁴ Furthermore, de minimis contributors may be allowed to make "cash out" payments and escape litigation altogether.⁵

The EPA settlement regulations list ten criteria for evaluating settlements including volume and toxicity of waste, the strength of their case, the ability of companies to pay and other inequities or aggravating factors.⁶ Another important step is that settlements may now be negotiated for specific phases of the cleanup process, i.e. investigation, feasibility study, surface removals, and groundwater regulations.⁷

II. WHY SETTLE?

A. Incentives for EPA to Settle

The EPA has focused on the use of §106 -Abatement action as an injunctive relief device to force PRPs to either do the cleanup or remedial work or pay for the government to do it. They have also become increasingly aggressive in utilizing §106 in settlement agreements, instead of using the federal response authority provided under §107 which requires government cleanup/remedial action and the expenditure of Superfund monies.⁹ This policy is being pursued due to the realities of the hazardous waste problem, namely, a basic lack of government funds to pursue rapid litigation enforcement, the lack of adequate Superfund money to cleanup sites and problems with effecting efficient government cleanup/remedial actions. Realistically, the pursuit of fast and efficient cleanup/remedial work required at thousands of sites nationwide cannot be accomplished in the manner contemplated by the statute.¹⁰

Some of the major incentives/realities causing the EPA to pursue an increasingly aggressive settlement policy are that:

(1) the use of the Fund is conditioned upon the EPA securing an agreement from the particular state in which the site is located to either pay 10% of the long term remedial costs or 50% response costs if the facility was owned by the State at any time.¹¹ States must also establish acceptable disposal facilities and assume monitoring and maintenance responsibilities at the site.¹² The majority of states have encountered serious problems in raising the necessary funds to obtain Federal Superfund action and the EPA is limited by the Statute to either a maximum expenditure of \$1 million dollars or six months of work on the site where the state has not fulfilled the prerequisite monetary and response obligations.¹³ As a result, federal action at sites is often incomplete and ineffective;

(2) federal cleanups are subject to greater regulation than efforts by private companies—the federal government must comply with the National Contingency Plan (NCP) requirements of §105¹⁴, RCRA¹⁵ and other numerous federal regulations before it can begin federal response actions. In contrast, cleanups commenced pursuant to court ordered injunctions or settlements (under §106), face less stringent requirements. Furthermore, the Government prefers private cleanup actions because it eliminates the possibility of future challenges to the "necessity and scope" of their actions;¹⁶

(3) federal cleanups are generally more expensive. Generators are often better equipped to undertake more cost-effective and efficient operations;¹⁷

(4) the EPA seeks abatement actions and settlements because of the highly political nature of the hazardous waste issue. Some of the political aspects are: (a) when the EPA gets a preliminary injunction (under §106) or uses it to achieve a settlement, the public perceives the EPA as having worked quickly;¹⁸ (b) that reduced Superfund expenditures make the Administration's budget deficit appear smaller; (c) fewer federal cleanups advance

Reagan's policy of decreased government regulation¹⁹ and (d) settlements avoid the conflicts which arise between the states and the EPA as states "compete" to have their hazardous waste sites listed on the NPL;²⁰

(5) abatement and settlement actions are often the most realistic and immediate responses to hazardous waste problems. Litigation can be dragged out and in the interim, the possibility of worsening site conditions increases;

(6) the entirely inadequate size of the Fund restricts its use and makes alternative enforcement methods crucial;²¹

(7) the Justice Department lacks the resources necessary to bring anywhere near the needed number of cases.²²

B. Incentives for PRPs to Settle

The first consideration for companies is usually an assessment of the probability and size of an adverse judgment. This is a serious matter for a PRP in a Superfund case due to the high cost of cleanup and remedial actions and because the courts have found that the Act imposes strict, retroactive and joint and several liability.²³ The policy has been, that unless a party can show that the harm is divisible, they are jointly and severally liable.²⁴ Given the nature of hazardous waste sites and the practice of mixing chemicals together which may result in synergistic effects, this is often impossible.

An adverse judgment may also result in a PRP paying administrative costs, penalties and treble damages.²⁵ Furthermore, with the EPA's current settlement policy and the reauthorization proposals now under congressional consideration, it is very possible that a PRP may end up paying less in settlement than it would if the case proceeds to judgment.²⁶

A second reason for PRPs to settle is to cut the costs of an extremely complex and protracted litigation process. It has been suggested that these costs, including discovery, responding to the complaint, depositions, and preparing pretrial motions to assert and preserve defenses, "could very quickly exceed the estimated costs of a company's settlement share, especially if a company is a 'small' generator in a multi-generator case."²⁷

An additional incentive for PRPs to avoid litigation and seek settlement is that the settlement process denies outside private parties (potential plaintiffs in subsequent causes of action) the advantage of the "paper trail" to defendants created by a trial and its accompanying discovery process, experts etc., all of which is available to plaintiffs as evidence from litigation.²⁸ The potential for "coat tail" lawsuits by private parties (i.e. personal injury and/or property damage) and resulting litigation costs may be many times greater than the costs of cleanup.²⁹ Note, however, that while fast settlements and the resulting early cleanups may decrease the likelihood of private suits, it does not prevent them. Furthermore, even with a settlement federal, state and private industries may have claims relating to the same site which were not resolved in the settlement and are, therefore, fair "game."³⁰ This potential post-settlement liability from private parties is exacerbated by the clear possibility that other RPs who did not join the settlement and are then pursued by the Government for cleanup costs, will later seek contributions from settling PRPs. The new reauthorization proposals seek to deal with these "extended liability" problems because after all, a major if not overriding incentive to settle, is to be released from further liability.

A third major incentive for PRPs to reach a quick settlement and response action is that costs for cleanup may be doubled or tripled if private parties go to litigation.³¹ The increased costs may be due to two factors: first, there is the possibility that more

extensive environmental contamination may result as litigation delays cleanup action. This will increase both the costs of cleanup itself and the possible resulting natural resources damages recoverable under the Act³² and possible damages to private property recoverable in tort actions.³³ Second, delays often cause the Government to conduct its own cleanup action which is invariably more time-consuming and expensive than voluntary private cleanup actions. In addition to the more efficient private cleanup operation, the Government often incurs additional delays and costs in its cleanup efforts mainly because it is concerned about later convincing a judge in a §107 cost recovery action against RPs, that it acted properly.³⁴

A fourth incentive for a company to settle and avoid litigation is the adverse publicity such litigation generates. Participation in a settlement agreement can actually generate positive publicity for a company by promoting its "good corporation citizen" image in a very serious community safety issue.³⁵

A final expense which may be avoided by reaching a settlement is "government enforcement costs." The Government currently maintains that such costs are recoverable under §104(b),³⁶ §111(c)(3) [Uses of Fund],³⁷ and §112(c)(3).³⁸

III. SETTLEMENT VS. LITIGATION

A. The Benefits of Litigation in General, Do They Apply in Hazardous Waste Context?

The basic realities of the hazardous waste situation, a very limited Superfund (which severely limits Government capability to clean up sites first and sue responsible parties later); limitations on Justice Department resources to bring suits where there are so many thousands of sites and, the delays in cleanup that result from protracted litigation, make it difficult to argue that settlements should not be utilized in this environmental context.

First, it has been suggested that while the litigation process has been a useful, if not necessary first step in the hazardous waste site cleanup context, its further use is now an obstacle to the cleanup goal. It has been suggested that because of the very nature of the legislative process; the creation of laws in an atmosphere of competing interests and compromise (which often result in ambiguities and vagueness) that litigation, while often "cumbersome, divisive, and costly" does serve a crucial function in the dispute resolution process. It has been said that "[l]itigation is an important tool to sharpen and hone the legal rights and responsibilities of parties under the law."³⁹

Such prerequisite litigation has certainly been necessary with CERCLA, as many of the statutory ambiguities have been eliminated by the courts and replaced by more precise boundaries, especially in the areas of strict liability and causation, joint and several liability and certain constitutional issues dealing with retroactive applications and generator and owner liability.⁴⁰ It has been suggested by the former EPA chief, William Ruckelshaus, that the slowness in advocating settlements by the EPA and Justice Department was due to the uncertainties that existed under CERCLA and to the Government's desire to first establish legal precedents in their favor.⁴¹ He feels that the companies are also to blame for the costly, time-consuming Superfund litigation that has ensued because many believed that they could win favorable court rulings.⁴²

It has been suggested that this is because the adversary system is not designed to quickly and fairly sort out facts of cases, but instead, in litigation, facts are developed through a slow and complex discovery process in which each side typically provides as little information as possible while presenting his/her case so that the record is most favorable to his/her client's interests and not

necessarily to present a clear picture of what occurred.⁴³

As suggested previously, another vital reason for achieving settlements is due to the simple reality that the amount of money in the Superfund is far too inadequate to do its function and that the government has limited litigation enforcement resources.

B. Arguments Against Settlement

A major argument against the use of the settlement process in this area involves problems often encountered by small generators/contributors in a multi-generator case. The EPA has had a policy of seeking settlement with the large generators/contributors for partial cleanup operations/costs and then pursuing small non-settlers for the remaining costs. Furthermore, the EPA has increasingly granted certain types of release/immunity from future claims as an additional incentive to settle.⁴⁴ The small generators argue that this unequal treatment results in their paying more than their fair share of cleanup costs as some of the large generator settlements only involve the less costly studies and surface water cleanups, leaving the much more expensive ground-water contamination costs to non-settlers.⁴⁵ For example, in *Jones v. Inmont*,⁴⁶ an agreement to do a list of surface activities was reached between the EPA and one major generator. In exchange for satisfactory completion of these activities, Inmont received a covenant not to sue as to civil liability or claims arising out of federal law.⁴⁷

Those settlements which release larger generators from liability for groundwater cleanup may heavily burden non-settling generators who may lack a right of contribution against the larger jointly liable, settling counterparts.⁴⁸ An alternative for small generators is to institute a class action suit against larger generators and the EPA for the cost of the more expensive groundwater cleanup.⁴⁹ This approach may be more difficult under the new reauthorization proposals which seek to protect settling parties. However, the new more aggressive settlement approach seems to require the EPA to negotiate with willing PRPs which may in turn alleviate small generator problems from the start.⁵⁰ Furthermore, while the settlement process has its problems, it is also true that litigation costs often exceed the cost of cleanup shares for small generators and, therefore, the most realistic avenue to pursue would be advocating a more effective settlement process, not turning to litigation.

The realization that settlements are a significant and crucial means to obtain cleanup remedial actions nationwide has gained overwhelming support in both the Senate and House as the Reauthorization Proposals now under congressional consideration contain the express goal of aggressively pursuing settlements in first instance.⁵¹

IV. A BRIEF SUMMARY OF FUTURE SETTLEMENT GUIDELINES PROPOSED UNDER THE SUPERFUND REAUTHORIZATION PROPOSALS

Four major proposal areas under consideration are:

1. *Major Settlement Procedures* — a. The Senate version requires the EPA to provide all PRPs with a report assigning shares of responsibility at a site (including government shares where parties are unknown or insolvent). This may prove to be a crucial expediting device for settlements as it eliminates a major source of dispute among PRPs in settlement negotiations. The EPA still has the discretion, under certain circumstances, to determine if settlement can be better achieved by alternate means. The EPA is prohibited from taking enforcement or remedial action within a certain number of days in order to give PRPs time to submit a "good faith" proposal to either undertake or finance the response action. This section includes a bonus provision in

which the Fund will pay 10% of the cleanup costs in certain situations. Another procedural change is a provision for judicial review (with possible costs to the Fund) of an EPA rejection of an offer where the reviewing district court finds that the rejection was "unreasonable."

b. The House Energy and Commerce bill procedural proposal gives the EPA more discretion in determining whether a negotiation period would facilitate a cleanup operation and if so, it shall inform PRPs and provide them with information on waste contribution parties and shares. The EPA is barred from taking response or enforcement action for a specified number of days unless there is a significant threat to public health. PRPs have a specified period to submit a proposal for financing the cleanup.

The House version also provides for extensive notice and information provisions, mixed funding, reviewability and penalties for failure to comply. The Senate and House versions have provisions for limiting liability on issues covered in the agreements.

2. *Releases* - There has been significant tension between PRPs wanting a final determination of liability at a site and the government not wanting the public to pay for the risk of future problems at a site. The PRPs argue that a major incentive to settle is lost when an agreement contains "reopeners" for unknown conditions and faulty remedies. Also, the government does not usually release liability associated with redisposal even when wastes are taken to a RCRA-approved site. Both the House proposals and the Senate proposal explicitly address the redisposal liability issue by permitting the Government to provide a covenant not to sue parties in full compliance with the settlement and who are implementing approved response action. Also, the Senate version proposes mandatory releases to those parties who, pursuant to a government approved remedy, disposed of wastes at a RCRA-approved site. Other mandatory releases are provided in the House and Senate proposals while certain Government enforcement measures remain intact. The House Energy bill also provides for a "Contingency Account" to be funded by premium payments from RPs in the event of future actions at settlement covered sites.

3. *Contribution* - Another disincentive to settle has been the possibility that once parties reach a partial agreement, non-settling parties who are subsequently sued by the Government for remaining cleanup costs, will in turn sue other RPs for contributions. RPs, therefore, who negotiate settlements have sought immunity from such suits. The House and Senate versions address this problem with specific protection for settling parties against later contribution claims involving matters covered in the settlement. Settling RPs are also given the right of contribution against non-settling RPs, although their rights are subordinate to those of the federal government or a state.

4. *DeMinimis Settlements* - A major criticism of settlements achieved in hazardous waste site situations is that small

generators are generally not pursued for inclusion in settlements which leaves them subject to litigation in which they end up paying proportionately more than their rightful shares, while large generators pay less than their fair share. Often, small generators pay litigation costs which exceed their share of cleanup costs. Both House and Senate proposals recognize the unfairness of this situation and provide the Government with the authority to reach settlements with de minimis parties. Both versions, however, leave such agreements to the discretion of the Government.

Wendy Miller, '86

FOOTNOTES

1. 50 Fed. Reg. 5035, 5036 (February 5, 1985).
2. *Id.*
3. *Id.* at 5039.
4. *Id.* at 5044.
5. *Id.* at 5036.
6. *Id.* at 5037-38.
7. *Id.* at 5038.
8. 42 U.S.C. §9606 (1980).
9. *Id.* at §9607.
10. See *infra*, notes 11-13 and accompanying text.
11. See 42 U.S.C. §9607.
12. *Id.* at §9607(c)(3).
13. *Id.* at §9607(c)(1).
14. See 42 U.S.C. §9605 (Supp. V 1981) and §9604(a)(1), (c)(4).
15. See 42 U.S.C. §6901 (1976).
16. *The Role of Injunctive Relief and Settlements in Superfund Enforcement*, 68 CORNELL L. REV. 706, 725 (1983). (Hereinafter cited as *Injunctive Relief*.)
17. *Id.*
18. *Id.*
19. *Id.* at 726.
20. Only NPL sites are eligible for federal response actions. See 42 U.S.C. §9605 (Supp V 1981).
21. The Superfund was a mere \$1.6 billion over four years while it has been estimated that the cleanup of sites will cost between \$26-44 billion. *Injunctive Relief*, *supra*, note 16.
22. C. Dinkins, *Shall We Fight or Will We Finish: Environmental Dispute Resolution in a Litigious Society* 14 ELR 10398 (1984). (Hereinafter cited as *Dinkins, Shall We Fight*.)
23. See, *United States v. Chem-Dyne Corp.*, 572 F.Supp 802 (S.D. 111 1984) and *United States v. A & F Materials Co.*, 578 F.Supp 1249 (S.D. 111 1984).
24. *Id.*
25. See generally, 42 U.S.C. §§9606(b); 9609; 9611; 9607(c); 9604, and 9612.
26. See *infra*, discussion on reauthorization proposals.
27. Moore, *Settlement of Superfund Cases* 9 CHEM. & RAD. WASTE LITIG. REP. 2 (1984). (Hereinafter cited as *Moore, Settlement*.)
28. *Id.* at 35.
29. *Id.*
30. *Id.*
31. See generally, *Injunctive Relief*, *supra* note 16.
32. See, 42 U.S.C. §9611. See also, §9631(3)(c).
33. Moore, *Settlement*, *supra* note 27, at 33-35 and *supra* notes 27-30 and accompanying text.
34. See generally, *Injunctive Relief*, *supra* note 16.
35. *Id.*
36. See, 42 U.S.C. §9604(b) (1980).
37. See, 42 U.S.C. §9611(c)(3). Uses of Fund include costs of a program to identify, investigate, and take enforcement action against releases of hazardous substances.
38. *Id.* at §112(c)(3). Attorney General may initiate action to recover amounts paid by the Fund to a claimant including related attorney's fees. See, *United States v. NEPACCO*, 579 F.Supp. 823 (W.D. Mo., 1984).
39. Dinkins, *Shall We Fight*, *supra* note 22.
40. See *supra* notes 23-24 and accompanying text.
41. W. Ruckelshaus ENV'TL LAW REP. (BNA) 912 (September 20, 1985).
42. *Id.*
43. *Id.* at 911.
44. 50 Fed. Reg. 5035 (February 5, 1985).
45. *Injunctive Relief*, *supra* note 16.
46. *Jones v. Immont*, 14 ELR 20442 (S.D. Ohio 1984).
47. *Jones v. Immont*, 14 ELR at 20443 (S.D. Ohio 1984).
48. *Injunctive Relief*, *supra* note 16.
49. *Id.* at 723.
50. See *infra* discussion on reauthorization proposals.
51. *Id.* See, C. Price, Asst. Admin. EPA, *Major Proposed Amendments to CERCLA's Enforcement Provisions* (Materials taken from speech given on November 18, 1985 for the Hazardous Waste Litigation Symposium, Garden City, New York).

The Pros and Cons of Irradiation

Conventional food processing uses a variety of chemical and physical means to preserve foods, including food additives, fumigants and plant growth regulators. Temperature regulation, such as sterilization, pasteurization and refrigeration is also used to process foods. However, a growing need for food with a longer shelf life, and a growing dissatisfaction with conventional chemical preservatives have spawned an avid interest in preserving food by ionizing energy.

Irradiation of food has been commended by advocates as being clean, safe and versatile. It is contended that irradiation may help prevent spoilage, replace chemical preservatives and fumigants posing health risks, disinfest dry foods of insects, extend the shelf life of food and kill parasites that cause trichinosis and salmonella diseases. However, opponents argue that irradiation of food may cause unknown chemical changes in food which could prove harmful to human health.

Until recently, irradiation had not been used on a commercial basis in the United States. However, the Food and Drug Administration (FDA) has recently approved irradiation of certain foods to be sold to the consumer. This article will discuss the irradiation process, the controversy surrounding its use and the current United States regulatory status.

Introduction

In the irradiation treatment process, food in containers (airtight packages, crates or metal boxes) or in bulk quantities, is placed on conveyor belts and guided into closed chambers where it is exposed to radiation at specific doses.¹ This process uses either gamma rays, x-rays or electron beams from generators.² Gamma rays and x-rays are electromagnetic radiation similar to ordinary light, microwaves and radiowaves, but they have higher energies and shorter wavelengths. Because gamma rays have more penetrating power, they are used most frequently for food irradiation.³ Gamma rays originate from the nucleus of an atom such as cobalt-60 or cesium-137, the two most frequently used sources of radiation for the food irradiation process.⁴

Gamma rays interact with the food by knocking out electrons from the atoms. A gamma ray enters the food molecules which are made up of atoms. Most of the beams or rays travel through the food molecule without affecting it. However, about 10 percent of the beams or rays stop inside the food cells. These emissions, called photons, use their energy to start the electrons in the food moving.⁵ The electrons dislodged by the gamma ray creates a "cascade" or chain reaction. These moving electrons ricochet, turning other atoms into electrically charged ions as well. The electrons cause chemical changes in the food⁶ and kill insects and most bacteria present.

The amount of radiation received by a food substance is measured in rads, an acronym for Radiation Absorbed Dose.⁷ One kilorad is equal to 1,000 rads, and one megarad is equal to one millirad.⁸ Another scale to measure the dose of radiation that various foods receive is in gray. A gray is the unit of energy absorbed by the substance as ionizing radiation passes through. A kilogray is equal to 1,000 gray. A gray is equivalent to 100 rads.⁹

Specific doses accomplish different objectives in the food irradiation process. Levels below 100 kilorads, considered to be a low dose, can reduce levels of bacteria that cause food spoilage, and can inhibit certain crops from sprouting. This effect would permit longer storage without spoiling.¹⁰ Levels from 100 kilorads up to a megarad, considered to be a medium dose, can control insects and parasites, and can pasteurize foods.¹¹ Levels above one megarad, considered to be a high dose, can sterilize foods and can completely destroy living organisms in or on foods, including molds, spores, bacteria and parasites.¹²

The Controversy

The proponents of food irradiation cite many benefits that can be derived from its use, and they stress the fact that irradiation does not cause the food to become radioactive. The use of radiation at appropriate source energy levels does not induce any detectable radioactivity in food. In order for a food to be rendered radioactive, the radiation must affect the nucleus of the atoms.¹³ However, appropriate levels of radiation merely affect the electrons in the outer shell of the atom, without interacting with the nucleus.¹⁴ Thus, food that is not rendered radioactive cannot expose consumers to radiation.

A major benefit of irradiation is that it can help prolong the shelf life of fresh food. A food product's shelf life is extended by inhibiting the growth and ripening of fresh produce, and by reducing the number of organisms that spoil food.¹⁵ Complete sterilization of food by irradiation results in a shelf-stable product

similar to canned food. Such prolongation of shelf life for fresh foods offers the possibility of an increased range for food distribution. In addition, treated foods can be shipped abroad to help reduce food-borne diseases, hunger, malnutrition and large post-harvest losses suffered in developing countries.¹⁶ Moreover, such foods will reduce the risks of introducing or spreading devastating pests from country to country, as well as minimize the entrance of disease into the food chain.¹⁷

Another alleged benefit of food irradiation is the control of insect infestation in cereals, flours, fresh and dried fruits. As a pesticide, irradiation could be used to replace ethylene dibromide (EDB), a fumigant that the EPA banned in 1984 because it is a known animal carcinogen.¹⁸ Another related use of irradiation is to "clean up" spices, garlic and onion powder. Spices are often contaminated with dirt and insects and conventional heat disinfecting destroys flavors. Irradiation can replace ethylene oxide, a chemical fumigant for the disinfestation of spices, whose safety has been questioned.¹⁹

Still another alleged benefit of irradiation is the control of pathogenic bacteria that cause public health problems. Irradiation could kill the parasites that cause trichinosis, making possible the serving of rarer pork and opening export markets to countries which do not currently accept U.S. pork because of the trichinosis problem.²⁰ In addition, irradiated poultry would be rendered free of salmonella, a pathogen thought to contaminate at least one-third of all the fresh poultry sold in the United States.²¹

As a preservative, irradiation could be substituted for potentially cancer-causing nitrites and nitrates in cured meats such as ham and bacon. Nitrites and nitrates have been used for some time to enhance flavor and color in cured meats. More importantly, these chemicals are used to destroy botulinus, a toxin producing bacterium. However, nitrosamines formed by residual nitrates are suspected of being carcinogenic. Because irradiation can destroy botulism spores, the quantity of potentially carcinogenic nitrates and nitrites can be reduced by up to 80 percent.²² Only a small quantity of chemicals would be necessary to enhance color and flavor.

Radiation could further act as a plant regulator, suggest proponents, by retarding or hastening the ripening of produce, and by inhibiting the sprouting of certain crops such as potatoes.²³

There are also minor benefits and uses of irradiation. Irradiation reduces freezer and refrigerator requirements and could result in energy savings in storage of more than fifty percent.²⁴ In addition, irradiation can be used to sterilize medical equipment and hospital food.²⁵ Also, irradiation treatment is claimed to improve the flavor and digestibility of certain foods and improve juice extraction from fruits and vegetables.²⁶ Moreover, irradiated food, because of its long shelf life, is very useful for military troop rations and for use by astronauts in space. Lastly, irradiation of food may be a good way to make use of spent nuclear fuel from a nuclear power plant.²⁷

Despite all these seemingly valuable benefits, critics feel that irradiation of food does not live up to its "clean and safe" billing. Critics feel there are still too many unanswered questions concerning irradiation safety for it to be adopted for use on a commercial basis.

The main concern of the critics is that not enough is known about the chemical changes occurring in food when it is irradiated. When radiation hits food, most of it passes through without changing it. However, the rays that do not pass through create a chemical havoc by activating the food's own electrons. These electrons bounce off one another, killing insects, destroying bacteria that cause spoilage, and slowing cellular growth (which slows ripening). However, this chain reaction also breaks

chemical bonds, thereby creating new chemical substances called radiolytic products.²⁸ Some of these radiolytic products are identical to naturally occurring substances. Others, however, are completely new and are called unique radiolytic products (URP's).²⁹ Because so little is known about URP's and their health effects, they are a serious cause for concern.

Irradiation critics contend that the only way to prove that URP's are not toxic, carcinogenic or mutagenic is through adequate traditional long-term testing involving feeding URP's found in irradiated foods to lab animals at higher doses than are being proposed for humans.³⁰ Current FDA policy requires this kind of testing for all food additives prior to FDA approval. However, according to the critics, studies that have been done to date have failed to demonstrate safety.³¹

Another problem cited by critics is the change in nutritional quality as a result of irradiation. Particular nutrients are sensitive to ionizing radiation. Vitamins A, C, E and especially B may be destroyed by the process. Amino acids and fats may also be altered.³² The effect of irradiation is probably comparable to that of heat sterilization processes. However, if widespread use of irradiation is allowed, many foods may be subject to more than one preservation process before they reach the consumer. This could mean a decline in the nutritional quality of our food supply overall. However, the FDA has suggested that when irradiation results in a significant loss of nutrients, enrichment may be appropriate. But, say critics, enrichment programs do not guarantee that a nutrient will be added in a form that is bioavailable to the human system, or restored in a way that matches the original state of balance with other nutrients.³³

In addition to concerns about safety, the limits of irradiation's effectiveness have been questioned by critics. Although irradiation kills salmonella, other bacteria that are more virulent and dangerous than salmonella may resist irradiation.³⁴ The elimination of non-resident bacteria could cause the actual favoring of those bacterial strains highly resistant to irradiation. This means that such resistant bacteria may be singled out and strengthened. Through mutation, irradiation may also produce dangerous variations in resistant bacteria, making them virtually impossible to destroy.³⁵ In addition, radiation could destroy microorganisms that normally serve as indicators of spoilage and contamination, leaving alive the most harmful microorganisms. Thus, consumers could buy unhealthy food that looked and smelled perfectly healthy.³⁶

Moreover, irradiation does not protect food products from bacterial contamination that may occur after treatment. Thus, traditional means of preserving foods such as canning, freezing or refrigeration may still be needed. Otherwise, food may appear to be safe, yet be seriously contaminated.³⁷

Problems with appearance, flavor and texture have been advanced as yet another limit on the use of irradiation of food. Fruit treated with radiation may become brown or mushy or ripen abnormally. Irradiated fruits may bruise easily and black spots may appear on the peel.³⁸ Certain foods may undergo color, flavor and texture changes as a result of irradiation, making them unappealing to consumers.

Irradiation also fails to control, and might actually encourage, aflatoxin. Aflatoxin is a naturally occurring carcinogen that is produced by some types of fungus and which is especially prevalent in grain. The EPA considers aflatoxin to be 1,000 times more carcinogenic than ethylene dibromide (EDB),³⁹ a fumigant banned by the EPA in 1984.

Critics further contend that food irradiation could pose other threats to the public and the environment, as well as to workers in processing plants. Critics worry that widespread use of irradiation

would dramatically increase the amount of radioactive materials being used and transported.⁴⁰ Nuclear materials transportation concerns has led many states to attempt to ban it from being transported on their highways. Also important is the fact that there will be residual radioactive wastes to dispose of at a time when nuclear waste disposal is recognized as a serious problem for which no acceptable solution has been found.⁴¹ In addition, although irradiation advocates contend that use of irradiation will reduce workers' exposure to dangerous chemicals, workers at irradiation facilities could face even more serious health risks from routine radiation leaks or accidents.⁴²

Opponents also argue that food irradiation might not be necessary as a substitute for dangerous or banned chemicals, nor is it really useful in solving world food shortages. One of the most commonly argued benefits of irradiation is that it can replace the banned EDB for disinfestation of fruit and wheat. However, opponents of food irradiation cite safer ways to achieve the same result.⁴³ Another commonly argued benefit of irradiation is that it can solve the world's food shortage and hunger problems. However, as one source contends, hunger is as much a "political, cultural and socioeconomic problem as it is a scientific and technological one."⁴⁴

The opponents' greatest concern about irradiated food relates to the issue of labeling. Under current FDA regulations, any retail food that has been irradiated must be labeled "Treated with ionizing radiation" or "Treated with gamma radiation."⁴⁵ The FDA has supported the notion that consumers have a right to know if food has been treated with radiation. Also, wholesale packages or bills of lading must carry the phrase "Treated with ionizing radiation—do not irradiate again."⁴⁶ This label on wholesale packages is seen as a built-in safety factor to prevent irradiation of food more than once. However, opponents of irradiation feel that the label should be clarified to give consumers even greater information as to the nature of the food product. The clarification can be words such as "to control spoilage" or "to extend shelf life." Opponents also feel that a universal symbol to denote radiation treatment of food should be required in the event that a consumer is non-English speaking.⁴⁷

Legal Framework

In 1958, an event occurred that had far-reaching consequences that are still felt today and which had an impact on the development and feasibility of food irradiation. Because most of the early research was federally-sponsored and funded,⁴⁸ and because enough consumer attention had become focused on the issue,⁴⁹ Congress was prompted, when it passed the 1958 Food Additives Amendment⁵⁰ to the Food, Drug and Cosmetic Act, to adopt specific provisions on food irradiation.

The FDA is responsible for protecting the public from harmful and adulterated foods, drugs and cosmetics through the Food, Drug and Cosmetic Act (FDC). FDA's jurisdiction over irradiated food and sources of radiation intended for use in producing, packaging and transporting food derives from the 1958 Food Additives Amendment.⁵¹ This amendment prohibits the use of a new additive (for taste, preservation or otherwise) until the sponsor of the additive has shown by testing that it is safe. In effect, the 1958 amendment shifted the burden of proof regarding the safety of food additives from the government to the food industry. Prior to 1958, food additives were presumed safe unless later proven dangerous. The new law reversed that presumption. Additives now had to be proven safe *before* they could be used.

The 1958 amendments impose certain procedural and technical requirements on the sponsor of the proposed food additive. The sponsor of a new food additive must file a petition with the

Secretary of the FDA, proposing the issuance of a regulation by the FDA prescribing the conditions under which the new additive may be safely used. The petition must contain adequate and sound scientific evidence that the proposed use is safe and will accomplish the intended technical effect. In addition, the information contained in the petition must include a statement of the conditions of the proposed use of the new additive, a description of practicable methods for determining the quantity of the new additive in or on food and any substance formed in or on the food as a result of the use of the additive, full reports of investigations made with respect to the safety of the new additive, and (upon request of the Secretary of the FDA) a full description of methods used in the production of the proposed additive.⁵²

Upon receipt of the petition and its accompanying information, the Secretary of the FDA may do one of two things: by order, either deny the petition, or establish a regulation prescribing the conditions under which such additive may be safely used.⁵³ If the Secretary chooses the former, the sponsor of the new food additive may re-petition after conducting more extensive tests and procedures in the hope of establishing the safety of the new additive. If the Secretary chooses the latter, the regulations as to the conditions of use of the additive will be published in the Code of Federal Regulations (CFR). These regulations may prescribe, *inter alia*, the maximum quantity of the additive to be used in or on food, the manner in which the additive may be added to or used in or on food, and any labeling or packaging requirements for the additive necessary to ensure the safety of its use.⁵⁴ In either case, the petitioner is notified of the Secretary's order and the reason for such decision.

Thus, if a sponsor can overcome the burden of showing that the additive is safe and support this conclusion with adequate and reasonable proof delineated in the petition, the Secretary may by order establish a regulation governing the use of the new additive. However, no such regulation shall issue if a fair evaluation of the data in the petition before the Secretary "fails to establish that the proposed use of the food additive, under the conditions of use to be specified in the regulation, will be safe."⁵⁵ To this clause is appended the "Delaney Clause," probably the most famous provision in any health or safety law. It states that "no additive shall be deemed to be safe if it is found to induce cancer when ingested by man or animal, or if it is found, after tests which are appropriate for the evaluation of the safety of food additives, to induce cancer in man or animal . . ."⁵⁶

When Congress was drafting the Food Additives Amendment, it was especially concerned with what was, in 1958, a promising new method of preserving food by irradiating it. Because of its concern, Congress classified the radiation source itself (cobalt-60 or cesium-137) as a food additive because that source could affect the characteristics of food just as more conventional additives did.⁵⁷ Furthermore, a food is considered adulterated "if it has been intentionally subjected to radiation, unless the use of radiation was in conformity with a [food additive] regulation or exemption in effect pursuant to [21 U.S.C.S. §348]."⁵⁸

Because radiation of food was classified as a food additive, the stringent requirements of the Food Additives Amendment of 1958 applied. Thus, sponsors of food irradiation petitions had the heavy burden of establishing the safety of irradiation through the use of test procedures and data. Frequently, however, sponsors of irradiation could not devise adequate analytic tests to measure the effect of irradiation on certain foods and the resulting safety of the irradiated product. Those who could develop feasible safety testing programs were disheartened by the prolonged length of time required for the testing procedures, as well as the cost of such programs. Thus, many government agencies and commercial

entrepreneurs who had developed an interest in the irradiation of food were discouraged from pursuing this new technology.

Current U.S. Regulatory Status

Regulations governing the use of irradiation on food are promulgated by the FDA and, after appropriate procedures (i.e., notice and comments), are codified in the current CFR⁵⁹ as final regulations.

Part 179 of the CFR begins with a listing of acceptable radiation sources. The source may be an x-ray tube producing X-radiation at energy levels of 300 kilovolts or less, a sealed unit producing radiation of not more than 2.2 million electron volts from certain enumerated isotopes (such as cesium-137 or cobalt-60), or a sealed unit producing neutron radiation from the isotope californium-252.⁶⁰ To assure the safe use of these radiation sources, the FDA requires that the sources be clearly labeled. The label must include information identifying the source, the amount of radiation emitted from the source, directions for installment and use, and a statement that no food shall be exposed to radiation sources in excess of the listed maximum dose.⁶¹

Part 179 of the CFR then discusses different types of sources, what foods they can be used on, and at what dosage levels. Section 179.22 sets the single treatment dosage limitation at below one megarad for spices,⁶² for wheat and for white potatoes.⁶³

Section 179.22 also requires the food treated with gamma radiation to be labeled to assure its safe use.⁶⁴ Retail packages must bear a label which says either "Treated with ionizing radiation" or "Treated with gamma radiation."⁶⁵ As noted earlier, labels are required on wholesale packages, invoices or bills of lading of bulk shipments.⁶⁶ This special labeling section for irradiated foods is in addition to a general product label required in another part of the CFR.⁶⁷

Part 179 also describes packaging materials for use during treatment of prepackaged foods. Certain types of packages, such as wax-coated paperboard or glassine paper, may be subjected to doses of radiation not exceeding one megarad.⁶⁸ Other types of packages such as vegetable parchments or nylon films may be subjected to doses of radiation of up to six megarads.⁶⁹

Very recently, however, the FDA has expanded its approval for irradiation of spices at higher doses than currently codified and has again proposed approval for irradiation of fresh fruits and vegetables.⁷⁰ This preliminary approval is under review by the Office of Management and Budget (OMB). If OMB feels this approval is reasonable, it will approve a new Notice of Proposed Rulemaking to be published in the Federal Register.

In addition, early in 1985, Radiation Technology, a commercial enterprise located in Rockaway, New Jersey, petitioned the FDA for approval of pork irradiation. On July 22, 1985, the FDA approved the irradiation of fresh pork. Armed with the FDA's approval, Radiation Technology submitted their proposal to the U.S. Department of Agriculture (USDA), which regulates meat products.⁷¹ On January 15, 1986, the USDA approved low dose gamma radiation of fresh pork carcasses and cuts to control *Trichinella spiralis*, a parasite that triggers trichinosis.⁷² The products must be clearly labeled to denote irradiation.⁷³ This rule in favor of irradiating pork is seen as being the strongest spur to the growth of irradiation in the United States in current years.⁷⁴

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FOOTNOTES

1. Thompson, Purifying Food Via Irradiation, 15 FDA Consumer 25 (Oct. 1981) (hereinafter cited as Thompson).
2. Garland, The Newest Problem on the Food Front, 14 MS. 77 (Nov. 1985) (hereinafter cited as Garland).

3. E. Roggenthen, Food Irradiation: Its Safety, Values and Dangers 8 (1984) (hereinafter cited as Roggenthen).
4. Thompson, *supra* note 1.
5. Crooks, The X-rayed Apple - Should You Eat It? Health 57, 58, (Oct. 1984), (hereinafter cited as Crooks). Each atom has a nucleus containing neutrons, which have no charge, and protons, which have a positive charge. Electrons, having a negative charge, surround the nucleus in a cloud. Normally, there are the same number of electrons as protons, so the charge is balanced or neutral. However, when the gamma ray "knocks off" an electron from an atom, the atom is turned into an ion with an electrical charge. Roggenthen, *supra* note 3.
6. Crooks, *supra* note 5.
7. Hunter, Irradiation of Food, 65 Consumer's Research 16, 19 (June 1982) (hereinafter cited as Hunter).
8. As a reference point, one kilorad (krad) is approximately 100,000 times the amount of energy to which a human is exposed in a typical chest x-ray. *Id.*
9. Roggenthen, *supra* note 3, at 9.
10. *Id.* at 9-10. See also Thompson, *supra* note 1.
11. Hunter, *supra* note 8.
12. Thompson, *supra* note 1.
13. Crooks, *supra* note 5.
14. Roggenthen, *supra* note 3, at 8-9. However, under certain circumstances, ionizing radiation emitted from an extremely high energy source can induce radioactivity in the nuclei of atoms absorbing the radiation. 49 Fed. Reg. 5716 (1984).
15. For example, irradiated seafoods may have freshness extended for about a week, berries up to two weeks, fresh refrigerated poultry up to 25 days, fresh ground beef up to three times the normal period, and vacuum-packed, refrigerated beef up to 60 days. Hunter, *supra* note 8, at 16.
16. Roggenthen, *supra* note 3, at 47-48.
17. *Id.* at 23.
18. Garland, *supra* note 2. In low doses, EDB has been shown to cause gene mutations and reproductive changes. The chief danger from EDB was in occupational exposure in the fumigation treatment chambers and warehouses. When used in farm wheat storage elevators, the problem was compounded by EDB residues getting permanently stuck in milling machinery, where it later penetrated wheat that was to be consumed. Berman, Irradiated Foods, 24 Environment 4, 5 (Sept. 1982).
19. The use of irradiation to replace ethylene oxide to disinfect spices was approved by the FDA in 1983 and is now being practiced commercially at Radiation Technology, Inc. of Rockaway, N.J. 130 Cong. Rec. H3440 (May 7, 1984).
20. *Id.*
21. 130 Cong. Rec. H3440 (May 7, 1984). It should be noted that there are twenty to thirty thousand cases of salmonella poisoning reported in the United States each year, but the incidence may be as high as two million. Roggenthen, *supra* note 3, at 32.
22. Yost, Now: Food That Lasts Almost Forever - Irradiation Keeps It Fresh, 224 Popular Science 40, 45 (Apr. 1984).
23. Radiation could be substituted for currently used maleic hydrazide, a sprout inhibitor of questionable safety. Hunter, *supra* note 8, at 17.
24. *Id.* The cost of energy in food preservation and preparation in the United States accounts for over 16 percent of the total energy used in the country. Supermarket owners are particularly interested in irradiated food because frozen food cases alone use 29 percent of a store's electricity. Roggenthen, *supra* note 3, at 35.
25. *Id.* at 46.
26. Hunter, *supra* note 8.
27. A by-product of spent nuclear fuel processing is cesium-137, a potential source of radiation for food. The Department of Energy claims that cesium by-products of "weapon-grade material" are useful for pork irradiation and possibly, in low doses, Bing cherries, raisins and nuts. Use of cesium-137 for food irradiation would substantially reduce disposal costs of nuclear plant wastes. In addition, acceptance of gamma radiation processing would be a boost to the troubled nuclear industry if the industry could sell the by-products of nuclear research. 131 Cong. Rec. H162 (Jan. 24, 1985).
28. Roggenthen, *supra* note 3.
29. See, Hunter, 68 Consumer's Research 20, 21 (Aug. 1985).
30. The FDA reviewed more than 400 studies of irradiated foods and determined that 84 percent of the studies were either inadequate or inconclusive for demonstrating safety. Of the remaining 16 percent, half demonstrated harmfulness. For example, studies sponsored by the U.S. Department of Agriculture (USDA), using high doses of irradiation, found testicular tumors or damage, lower survival rates of animals, and decreased number of offspring. Some animals fed irradiated foods also developed cells that contained an abnormal number of chromosomes. In addition, the army-sponsored studies had to be rejected by the FDA because they were inadequate, and in some cases fraudulent. Garland, *supra* note 2, at 78.
31. *Id.* at 79.
32. Hunter, *supra* note 8, at 18-19.
33. For example, the bacteria responsible for botulism could resist the recommended levels of radiation. Roggenthen, *supra* note 3, at 41.
34. *Id.* at 41-42.
35. Garland, *supra* note 2, at 78.
36. Radiation does not stop the breakdown of enzymes in meat, fish and poultry. In addition, it does not arrest oxidative reactions that lead to rancidity in meat, poultry and fish. Hunter, *supra* note 8.
37. Crooks, *supra* note 5.
38. Hunter, *supra* note 8, at 18. See also 130 Cong. Rec. H3441 (May 7, 1984).
39. Garland, *supra* note 2, at 79.
40. Critics contend that the amount of radiation entering and leaving a typical food irradiation plant every five years would be five times the total volume of low level nuclear wastes produced in the United States by all sources in 1981. *Id.*
41. *Id.*
42. *Id.* However, the FDA claims that irradiation facilities would be regulated by the Nuclear Regulatory Commission (NRC), and the Occupational Safety and Health Administration (OSHA). OSHA regulates worker safety from all ionizing radiation sources. 29 C.F.R. §1910.96 (1985). Furthermore, radiation plants using radioactive sources must conform to the NRC's regulations concerning worker safety, including personnel dose monitoring devices, radiation protection programs, personnel qualifications and training, and licensing of by-product material irradiators. 10 CFR §20.30 (1985).
43. For example, there are fruit fly control programs that involve monitoring the fly population and managing it by releasing sterile male insects. For disinfecting stored grain, carbon dioxide, microwave or infrared treatment are alternatives to both EDB and irradiation without the drawback of either. See, *supra* note 39.
44. For example, grain spoils on Ethiopian docks because of inadequate distribution facilities and thus irradiation is not a solution to the problem. *Id.*
45. 21 C.F.R. §179.22(c)(1), .24(d)(2) (1985).
46. *Id.* at §179.22(c)(2), .24(d)(2).
47. However, proponents suggest that use of a symbol as a warning to consumers may discourage the sale of irradiated food. This fear appears to be unfounded, judging from experiences elsewhere. Symbols to denote radiation treatment of food are required in several countries, including Australia, Belgium, Holland, Israel and South Africa, and apparently the requirement has not discouraged sales. Hunter, Food Irradiation Update, 68 Consumer's Research 20, 23 (Aug. 1985).
48. For example, the U.S. Army spent \$51 million between 1953 and 1978 on research concerning the safety of irradiating certain meats and food products. By 1984, about \$80 million had been spent by government and industry on food irradiation research, according to then Health and Human Services Secretary Margaret Heckler, an irradiation advocate. Garland, *supra* note 2, at 78. See also Thompson, *supra* note 1, at 27.
49. Letter from George Giddings, Director of Food Irradiation Services of ISOMEDIX, Inc., New Jersey at 3 (prepared Oct. 1984).
50. 21 U.S.C.S. §348 (1984).
51. *Id.* See also 21 U.S.C.S. §321(s) (1984).
52. *Id.* at §348(b).
53. *Id.* at §348(C)(1).
54. *Id.*
55. *Id.* at §348(C)(3)(A). This safety standard is commonly referred to as the "general safety clause." Cooper, Saccharin and Democracy, 40 Food Drug Cosm. L.J. 34, 39 (1985) (hereinafter cited as Cooper).
56. 21 U.S.C.S. §348(C)(3)(A) (1984). Although the "Delaney Clause" is the principal target of attacks on the current standards for food safety regulation, (See e.g., S. 1442, 96th Cong., 2d Sess. (1981); H.R. 404, 96th Cong., 2d Sess. (1981) (Senator Hatch's proposal to delete the "Delaney Clause" from the Food, Drug and Cosmetic Act because the requirement of "zero risk" of cancer is inflexible and unfeasible), the general safety clause is actually far more important and far more protective of the public health. The "Delaney Clause" only applies when the FDA makes a positive finding that a substance has, in fact, induced cancer. If the FDA cannot make that finding (if the relevant study is inconclusive or defective), then the "Delaney Clause" does not apply. However, under the general safety clause, even an inconclusive or defective study may raise a substantial question about the safety of a food additive. Where such a question exists, the additive has not been shown to be safe, and therefore it should not be approved. Thus, the "Delaney Clause" imposes a much higher burden on the government than does the general safety clause (i.e., requirement of a positive finding of cancer compared to a requirement of a substantial question about safety). Cooper, *supra* note 55, at 40. Furthermore, the FDA itself has characterized the "Delaney Clause" as superfluous, maintaining that the general safety clause would itself prohibit the approval of any carcinogen in a food additive. Schultz, The Bitter Aftertaste of Saccharin, 40 Food Drug Cosm. L.J. 66, 67 (1985).
57. 21 U.S.C.S. §321(S) (1984). The Senate report on the 1958 Food Additives Amendment made clear that "[s]ources of radiation (including radioactive isotopes, particle accelerators and x-ray machines) intended for use in processing food are included in the term 'food additives' as defined in this legislation." S. Rep. No. 2422, 85th Cong., 2d Sess. 63 (1958).
58. 21 U.S.C.S. §342(a)(7) (1984).
59. 21 C.F.R. §179.21 (1985).
60. *Id.* at §179.21(a) (1)-(3).
61. *Id.* at §179.32(b).
62. *Id.* at §179.22(b).
63. *Id.* As is evident from this recitation of approved and codified dosage limits, the FDA, contrary to its proposed regulations in the Notice of Proposed Rulemaking (NPRM) did not approve irradiation of spice and seasonings at dosage levels of up to three megarad. The 1985 C.F.R. regulation sets the dosage limits of spice at no greater than one megarad. In addition, irradiation of fruits and vegetables was not approved in the 1985 final regulations at any levels, unlike the NPRM which suggested irradiation dosage limits for fruits and vegetables should be one megarad or less. Thus, there was clearly a marked change between what the FDA proposed in the NPRM in 1984, and what it finally codified in 1985. Compare 49 Fed. Reg. 5722 (1984) (proposed §179.26(b)) with 21 C.F.R. §179.22(b) (1985).
64. 21 C.F.R. §179.22(c) (1985).
65. *Id.* at §179.22(c)(1). Here again, contrary to the FDA's proposed regulation announced in the 1984 NPRM, the FDA, when finalizing the regulation, ultimately did require a label on retail packages of irradiated food. Compare 49 Fed. Reg. 5722 (1984) (proposed §179.26(c)) with 21 C.F.R. §179.22(c)(1) (1985). Also see, 21 C.F.R. §179.21 (1985).
66. This provision in the current 1985 regulations was also in the proposed rules. See 49 Fed. Reg. 5722 (1984) (proposed §179.26(c)) and 21 C.F.R. §179.22(c)(2) (1985). See, *supra* note 46, and related text.
67. See 21 C.F.R. §101 (1985) (general requirements of labels for all food products).
68. 21 C.F.R. §179.45(b).
69. *Id.* at §179.45(c).
70. Gianotti, The Growing Use of Irradiation, Newsday, Jan. 22, 1986, Part II, at 9 (hereinafter cited as Gianotti).
71. Meat products are generally regulated solely by the USDA. However, because irradiation is still defined as a food additive (21 U.S.C.S. §321(s) (1984)), the FDA must also approve new uses. Thus, to irradiate a meat product, the petitioner must get approval from both the FDA and the USDA. *Id.*
72. 51 Fed. Reg. 1769-01 (1986) (to be codified at 31 C.F.R. §318 (1986)).
73. *Id.*
74. Gianotti, *supra* note 70.

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