

Antitrust Issues in the Medical Waste Industry

Territory Allocation, Monopolization, and Mergers in
a Highly Concentrated Industry

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I. Introduction

Medical waste is described as used human tissues and fluids, cultures, needles, surgical gloves, and other discarded surgical and medical equipment.¹ It is a special category of waste which is highly regulated and controlled. The majority of medical waste is generated by hospitals, with doctors' offices, laboratories, and home healthcare providers producing the remainder. Due to the infectious nature of some medical waste there are concerns regarding the handling of medical waste. In the 1980s, medical waste such as needles washed up on beaches around the country, the public became aware that the mishandling of medical waste could lead to the transmission of disease and pathogens.

The public attention catalyzed the development of federal regulations. The medical waste transport and disposal industry is highly regulated due to the potentially dangerous nature of the materials involved.² Medical waste is regulated from *cradle to grave*, meaning that medical waste is tracked from its handling, treatment, and disposal. The regulation of waste disposal varies from state to state.³ The Environmental Protection Agency (EPA) has issued rules to regulate the incineration of medical waste.⁴ The Department of Transportation (DOT) regulates the transport of medical waste, which it classifies as a hazardous material, and the regulation extends to packaging and labeling.⁵ The Occupational Safety and Health Administration (OSHA) regulates the proper

¹ U.S. Environmental Protection Agency, *Wastes: Medical Industry Wastes* <<http://www.epa.gov/epaoswer/other/medical/>> (accessed July 29, 2004).

² Travis E. Poling, *Dangerous disposables; New laws and changing demographics fuel medical waste industry's growth*, San Antonio Express-News (Texas) 1J (Feb. 27, 2000, Sunday).

³ U.S. Environmental Protection Agency <<http://www.epa.gov/epaoswer/other/medical/>>.

⁴ U.S. Environmental Protection Agency, *EPA-OAQPS – Taking Toxics out of the Air* <<http://www.epa.gov/airprogm/oar/oaqps/takingtoxics/p3.html>> (accessed July 29, 2004).

⁵ University of California Los Angeles, *Department of Transportation Regulations for Medical Waste* <<http://biosafety.ucla.edu/docs/New%20Department%20of%20Transportation%20Regulations%20for%20Medical%20Waste.pdf>> (accessed July 29, 2004).

handling of medical waste⁶ and the Nuclear Regulatory Commission regulates radioactive medical waste.⁷

Hospitals, doctors' offices, and other health care facilities are required to segregate medical waste, placing sharps, such as syringes and lancets, in special containers and other medical waste in red plastic bags. General trash is disposed of in clear bags.

Hospitals and other medical providers produce both infectious and noninfectious medical waste. About 10 to 15% of all waste produced by hospitals is considered infectious.⁸

Non-infectious waste is sent directly to landfills while infectious waste is either incinerated or steam sterilized.⁹ Autoclaving is a process that first grinds, and then sterilizes the waste by applying a pressurized steam treatment.¹⁰ Incinerators are subject to the emissions standards mandated within the Clean Air Act. A significant problem with the incineration method of disposal is that dioxins are released into the air from the polyvinyl chloride used to make medical equipment. Additionally, dangerous metals may be released from the incineration of medical waste such as cadmium, lead, and mercury. Incinerator emissions often contain particulate matter, metals, acid gases, oxides of nitrogen, carbon monoxide, organics, and other materials such as pathogens,

⁶ U.S. Department of Labor, *Safety and Health Topics: Bloodborne Pathogens and Needlestick Prevention* <http://www.osha-slc.gov/SLTC/bloodbornepathogens/index.html> (June 23, 2004).

⁷ U.S. Nuclear Regulator Commission <<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1989/in89085.html>> (accessed July 31, 2004).

⁸ Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Medical Waste Incinerators [1996 Reproposal], 61 Fed. Reg. 31,736, 31,769 (June 20, 1996) (to be codified at 40 C.F.R. pt. 60).

⁹ Arnold W. Reitze, Jr. and Michael K. Stagg, *Air Emissions Standards and Guidelines under the Clean Air Act for the Incineration of Hospital, Medical, and Infectious Waste*, 28 Env'tl. L. 791, 798 (Winter 1998).

¹⁰ Mechanical Engineering, *Rx for Medical Waste*, <<http://www.memagazine.org/backissues/sept00/features/rx/rx.html>> (accessed July 29, 2004).

cytotoxins, and radioactive diagnostic materials.¹¹ Adhering to regulatory requirements makes such incinerators costly to build and maintain.¹²

In the past, most medical waste was incinerated on site, however, due to changes in regulations, less than half of hospitals incinerated their waste onsite by the mid 1990s. Almost all medical waste producers besides hospitals send the waste offsite for treatment or use autoclaving onsite.¹³

Stericycle is the nation's leading provider of medical waste management services, providing service to 290,000 customers at 42 treatment facilities and 97 transfer and collection sites.¹⁴ Stericycle made 11 acquisitions in the year 2002 and a total of 66 acquisitions since 1993.¹⁵ In 2003, Stericycle acquired Scherer Healthcare, Inc. which focused its business on collection of sharps.¹⁶ In 1999 Stericycle purchased the medical waste business from Browning-Ferris Industries¹⁷ and also acquired Allied Waste in 1999.¹⁸ It is estimated that Stericycle has a 25% market share nationally, in a \$1.5 billion industry. Stericycle's next biggest competitor only has a 2% market share, and entry barriers are high for new competitors because of EPA and OSHA regulations along with high capital costs.¹⁹

¹¹ U.S. Environmental Protection Agency, *Medical Waste Incineration*, <<http://www.epa.gov/ttn/chief/ap42/ch02/final/c02s03.pdf>> (accessed July 29, 2004).

¹² Mechanical Engineering, *supra* n. 11.

¹³ Reitze, *supra* n. 10 at 798.

¹⁴ Stericycle, Inc., 2003 Annual Report (2004).

¹⁵ *Id.*

¹⁶ Stericycle, *Press Releases 2003* <http://www.stericycle.com/news_01_09_03.htm> (accessed Jan. 9, 2003).

¹⁷ Stericycle, *Press Releases 1999* <http://www.stericycle.com/news_11_12_99.htm> (accessed Nov. 12, 1999).

¹⁸ Stericycle, *Press Releases 1999* <http://www.stericycle.com/news_10_15_99.htm> (accessed Oct. 15, 1999).

¹⁹ Journal Sentinel, *Stericycle upped medical waste operating margins, analyst notes*, <<http://www.jsonline.com/bym/invest/oct02/90885.asp>> (Oct 26, 2002).

The major players in the medical waste disposal industry have attracted the attention of antitrust enforcers and customers have brought private antitrust lawsuits against these companies. This paper will explain the antitrust issues facing the medical waste disposal industry, with a focus on territorial/market allocations under the guise of asset swaps and the effects of mergers on industry concentration.

II. Sherman Act § 1

The Sherman Act makes contracts, combinations and conspiracies in restraint of trade illegal.²⁰ Specifically, unreasonable restraints of trade are judged to be illegal.²¹ § 1 of the Sherman Act also requires an interstate nexus to trigger the power of Congress.

There are a variety of potential violations of § 1 of the Sherman Act, including price fixing, bid rigging, boycotts, and other unreasonable restraints of trade brought about by a contract or conspiracy.

A. Per Se and Rule-of-Reason Analysis

Two methods of antitrust analysis, the *per se* rule and the rule of reason, have arisen over the years to deal with the interpretation of the Sherman Act. “There are certain agreements or practices which because of their pernicious effect on competition and lack of any redeeming virtue are conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use.” Such actions are considered *per se* violations. Examples of *per se* violations are: price fixing, division of markets, group boycotts, and tying

²⁰ 15 U.S.C.S. § 1 (2004).

²¹ *Dr. Miles Medical Co. v John D. Park & Sons Co.*, 220 US 373 (1911).

arrangements.²² The *per se* rule outlines what types of behavior are legal and illegal, providing guidance to businesses so *per se* violations can be avoided.²³

With the “rule of reason”, the court considers reasonableness of the restraints of trade.²⁴ In performing rule-of-reason analysis, a court will examine the purpose and nature of the conduct, the actual and potential effect on consumers, along with the change in choice, price, and output.²⁵ Under the rule of reason, the anticompetitive effects of the conduct must outweigh the legitimate business interests for there to be a violation.²⁶

The rule of reason is a case-by-case analysis to determine whether an antitrust violation has occurred where the *per se* rule eliminates the necessity to examine the details of conduct to determine if there has been a violation. “A principal consideration in determining whether to apply the rule of reason or *per se* standard is whether the practice tends to restrict competition or, rather, is designed to promote economic efficiency and competitiveness.”²⁷ The line between which actions should be analyzed under the rule of reason or the *per se* rule is often unclear.²⁸

B. § 1 Per Se violations

1. Price Fixing

²² *Northern P. R. Co. v. United States*, 356 U.S. 1, 5 (1958).

²³ *United States v. Topco Associates, Inc.*, 405 U.S. 596, 610 (1972).

²⁴ Lawrence A. Sullivan & Warren S. Grimes, *The Law of Antitrust: An Integrated Handbook* 192 (West 2000).

²⁵ *National Collegiate Athletic Ass’s v. Board of Regents*, 468 U.S. 85, 103 (1984).

²⁶ *Sullivan v. NFL*, 34 F.3d 1091, 1096 (1st Cir. 1994).

²⁷ *Reynolds v. California Dental Service*, 200 Cal. App. 3d 590, 599 (Cal. App. 1st Dist. 1988).

²⁸ Raymond Krauze and John Mulcahy, *Antitrust Violations*, 40 Am. Crim. L. Rev. 241, 246 (Spring 2003).

Horizontal price fixing is a conspiracy among competitors to fix prices. Price fixing can include: “raising, depressing, fixing, pegging, or stabilizing the price.”²⁹ The purpose of price fixing is to eliminate competition. A reasonable price fixed today may not be reasonable in the future.³⁰ *Trenton Potteries* determined price fixing to be *per se* illegal stating “[a]greements which create such potential power may well be held to be in themselves unreasonable or unlawful restraints, without the necessity of minute inquiry whether a particular price is reasonable.”³¹

2. Cartelization

A concerted agreement to certain terms is considered cartelization.³² Such an agreement allows for exerting market power like a monopolist.³³ Cartels are considered illegal *per se* and this was established in the early antitrust case, *Addyston Pipe*.³⁴ To prove cartelization, the resulting harm must be intertwined with the cartel; there must be a significant causal connection between the alleged conspiracy and alleged anticompetitive effects.³⁵ Cartels often occur in industries and markets where it is easy for competitors to verify production and prices.³⁶

3. Bid Rigging

The formation of a conspiracy in order to rig bids and allocate contracts is illegal *per se*.³⁷

In *Portsmouth Paving*, a conspiracy was formed to allocate highway construction

²⁹ *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 223 (1940).

³⁰ *United States v. Trenton Potteries Co.*, 273 U.S. 392, 397 (1927).

³¹ *Id.* at 397.

³² Philip E. Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application*, vol. 1, § 220 (Aspen Publishers 2002) (citing L. Sullivan, *Law of Antitrust* 257 (1977)).

³³ *Id.*

³⁴ Philip E. Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application*, vol. 4, § 902 (Aspen Publishers 2002) (citing *United States v. Addyston Pipe & Steel Co.*, 85 F. 271 (6th Cir. 1898), modified and affirmed, 175 U.S. 211 (1899)).

³⁵ *International Raw Materials v. Stauffer Chem. Co.*, 978 F.2d 1318, 1328 (3rd Cir. 1992).

³⁶ Areeda, *supra* n. 35, at § 944e.

³⁷ *United States v. Portsmouth Paving Corp.*, 694 F.2d 312, 317 (4th Cir. 1982).

contracts.³⁸ The conspirators agreed to refrain from bidding, give non-competitive bids, and rigged bids.³⁹ Bids were also withheld and others were submitted that were artificially high. The behavior of the conspiracy was enough to find bid rigging and thus a *per se* violation.⁴⁰

4. Group Boycott

Combined refusals to deal with other merchants is a *per se* violation of antitrust laws.⁴¹ In *Klor's*, the Court found that there had been an illegal boycott when manufacturers and distributors refused to sell to a retailer and thus restrained that retailer's ability to trade.⁴² The actions of the boycott were held to have a "monopolistic tendency" that should not be tolerated.⁴³

5. Market, Territory, or Customer Allocation

Agreements to allocate territory in order to minimize competition are *per se* illegal.⁴⁴ Intent is not an element of a *per se* violation. "[T]he sole issue in *per se* antitrust analysis is the effect of the alleged practice and not the purpose behind the practice."⁴⁵ In examining the allegation of a *per se* violation, there is a need to define a relevant market, however, market definition and power are not required for a *per se* analysis.⁴⁶ Although determination of market definition and power are not required under *per se* analysis, an

³⁸ *Id.* at 315.

³⁹ *Id.* at 316.

⁴⁰ *Id.*

⁴¹ *Klor's, Inc. v. Broadway-Hale Stores, Inc.*, 359 U.S. 207, 212 (1959) (A group boycott against an individual retail store by a retail chain and distributors was a *per se* antitrust violation).

⁴² *Id.*

⁴³ *Id.* at 213.

⁴⁴ *Topco Associates, Inc.*, 405 U.S., at 608.

⁴⁵ *UXB Sand & Gravel v. Rosenfeld Concrete Corp.*, 599 A.2d 1033, 1036 (1991).

⁴⁶ *FTC Superior Ct. Trial Lawyers Ass'n*, 493 U.S. 411, 432-36, (1990) (analysis under the *per se* rule does not consider market power)

antitrust injury must be shown.⁴⁷ Several cases are discussed below to illustrate the evolution of the *per se* rule regarding territorial allocations.

In *Topco*, a group of small grocery stores created an association to market and distribute private brand products. The use of private brands was important in order to compete with larger grocery store chains.⁴⁸ Although the trial court found that there was not an antitrust violation because intrabrand competition was being sacrificed to encourage interbrand competition, the Supreme Court held that horizontal market division was *per se* illegal.⁴⁹ Horizontal limitations are *naked* restraints⁵⁰ with no purpose but to limit competition.⁵¹

The court in *Sylvania* stated that broad generalizations are made about the social utility of a particular commercial practice when determining if conduct should be analyzed under the *per se* rule. The likelihood of anticompetitive consequences should be considered while balancing the severity of such consequences against the procompetitive consequences of the activity.⁵²

A classic example of such an agreement was in *Palmer* where two competitors selling bar review materials made an agreement to allocate the geographic market with each other. In this example, the two companies competed in the same market and then agreed one competitor would have the state of Georgia and the other would have the rest of the

⁴⁷ *Atlantic Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 342 (1990).

⁴⁸ *Topco Associates, Inc.*, 405 U.S.

⁴⁹ Sullivan, *supra* n. 26, at 225-226.

⁵⁰ A naked restraint has purpose or outcome of an increase in prices. Philip E. Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application*, vol. 11, § 1906a (Aspen Publishers 2002).

⁵¹ *Topco Associates, Inc.*, 405 U.S. at 608.

country. Such agreements are illegal on their face because they are anticompetitive no matter whether they split a market in which both companies do business or give a segment to one competitor and another segment to the other competitor.⁵³

6. Tying

Tying is not typically considered *per se* violation; however, in some circumstances a court may find a tying arrangement to be *per se* illegal. If there is sufficient economic power in the tying market to restrain trade in the market for the tied product, the tying arrangement may be judged to be *per se* illegal.⁵⁴ “Liability [for tying] under § 1 of the Sherman Act can be established if (1) two separate products are involved, (2) the defendant forces customers to take the tied product in order to obtain the tying product, (3) the arrangement affects a "substantial volume" of interstate commerce, and (4) the defendant has "market power" in the tying product market.”⁵⁵ In order to make a tying case under § 1 of the Sherman Act there must also be a contract, combination, or conspiracy.⁵⁶

C. Determining the Main Purpose of the Transaction

The purpose of an asset swap should be examined to determine if the transaction is actually an illegal market allocation. All asset swaps are not illegal, only if such a transaction has the purpose to unreasonably restrain competition should the transaction be declared illegal under the Sherman Act. The court in *Village Voice Media* gave guidance on how to determine if an asset swap is actually an illegal market allocation.

⁵² *Continental T. V. v. GTE Sylvania*, 433 U.S. 36, 50 (1971).

⁵³ *Palmer v. BRG of Georgia, Inc.*, 498 U.S. 46 (1990).

⁵⁴ Robert Bejesky and Orlando Valle, *Consumer Welfare and the Sherman Antitrust Act: Reflecting on the Microsoft-Netscape Browser Competition*, 19 T.M. Cooley L. Rev. 37, 42 (2002) (quoting Thomas A. Piraino, Jr., *Identifying Monopolists' Illegal Conduct Under the Sherman Act*, 75 N.Y.U. L. Rev. 809, 836 n.150 (2000)).

⁵⁵ Bejesky, *supra* n. 55, at 41.

1. Business justification

Competitors cannot agree to swap markets.⁵⁷ Without a business justification, it is difficult to view the asset swap as anything other than a restraint of trade.⁵⁸ “In general, a business justification is valid if it relates directly or indirectly to the enhancement of consumer welfare. Thus, pursuit of efficiency and quality control might be legitimate competitive reasons for an otherwise exclusionary refusal to deal, while the desire to maintain a monopoly market share or thwart the entry of competitors would not.”⁵⁹ In *Village Voice Media*, two competing alternative weekly newspapers sold (swapped) assets with each other in two major US cities.⁶⁰ As a result of the transaction, there was no competition in the market for alternative weekly newspapers and the advertisers were charged higher rates.⁶¹ The court in this case found that the transaction did not have a proper business justification because it did not promote productivity and efficiency because of reduction in options for consumers and higher prices for advertisers.⁶²

2. Assets transferred

In order for an asset swap to be legitimate, real assets should be transferred and integrated into the new company.⁶³ Without the transfer of real assets, the transaction will look like a territorial allocation.⁶⁴ In *Village Voice Media*, when the competitors left the market in the respective city, only the accounts receivables were sold. The court in *Village Voice Media* found that these accounts receivable were not assets associated with “actual

⁵⁶ 15 U.S.C.S. § 1.

⁵⁷ *United States v. Village Voice Media, LLC*, 2003 WL 21659092, 19 (N.D. Ohio 2003).

⁵⁸ Maurice E. Stucke, *Evaluating the Risks of Market Swaps*, 18 *Antitrust* 67 (Fall 2003).

⁵⁹ *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1183 (1st Cir. 1994) (citing *Eastman Kodak Co. v. Image Technical Servs.*, 504 U.S. 451, 483 (1992)).

⁶⁰ *Village Voice Media, LLC*, 2003 WL.

⁶¹ *Id.* at 19.

⁶² *Id.*

⁶³ Stucke, *supra* n. 57.

⁶⁴ *Id.*

operations and goodwill.” The court went on to say that the assets “were of little value, even by the defendants’ own calculations.” The sale of accounts receivable were a key point in determining that a *per se* territorial allocation had taken place.⁶⁵

3. Structure of transaction

If an asset swap is direct, it will appear to resemble market allocation.⁶⁶ There was an agreement in *Village Voice Media* that one competitor would close down its newspaper in one city, while the second competitor would close down its newspaper in the other city. In this case there was a ten-year non-compete agreement between the competitors to not solicit advertisers from the other competitor. The two newspapers also agreed not to sell the closed paper to its former employees or contractors that would want to revive the paper and once again provide competition.⁶⁷

4. Impact of swap on market

If there are adverse impacts on the market, especially regarding pricing, then the asset swap may be considered market allocation.⁶⁸ In the *Village Voice Media* case, there were plans to raise rates, and in some instances rates were actually raised after the market allocation occurred. Such a rise in rates serves as a confirmation that the intent of the transaction was to allocate the market.⁶⁹

5. Ancillary restraints on competition

Non-compete provisions that are part of an asset swap agreement may lead to a conclusion that the asset swap constitutes market allocation.⁷⁰ Non-compete agreements

⁶⁵ *Village Voice Media, LLC*, 2003 WL., at 20.

⁶⁶ Stucke, *supra* n. 57.

⁶⁷ *Village Voice Media, LLC*, 2003 WL., at 20.

⁶⁸ Stucke, *supra* n. 57.

⁶⁹ *Village Voice Media, LLC*, 2003 WL., at 20.

⁷⁰ Stucke, *supra* n. 57.

are often considered ancillary restraints on competition.⁷¹ Documents in the *Village Voice Media* case show that there was intent among the parties to allocate territory and be the sole player in the market.⁷²

D. Application of § 1 of the Sherman Act to the Medical Waste Industry

In order for there to be a violation of § 1 of the Sherman Act, there must be a “contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade.”⁷³ In short, there must be an agreement for a § 1 violation. The medical waste disposal industry has one very large player with a very large market share. Small, local firms control the remainder of the market share. In such a situation it actually may be less likely that there will be collusion among competitors. Collusion appears more likely when there are similar sized firms, with similar situations.⁷⁴ Stericycle may not be interested in forming a conspiracy in restraint of trade with much smaller competitors. Agreements such as territorial allocations have recently been the subject of antitrust litigation in the medical waste disposal industry and would be evaluated under § 1 of the Sherman Act. Other conduct that unreasonably restrains competition may be challenged under § 1 of the Sherman Act.

E. Case Study: State of Utah v. Stericycle, et al.

⁷¹ *United States v. Addyston Pipe & Steel Co.*, 85 F. 271, 281 (6th Cir. 1898) (Ancillary restraints include: “agreements (1) by the seller of property or business not to compete with the buyer in such a way as to derogate from the value of the property or business sold; (2) by a retiring partner not to compete with the firm; (3) by a partner pending the partnership not to do anything to interfere, by competition or otherwise, with the business of the firm; (4) by the buyer of property not to use the same in competition with the business retained by the seller; and (5) by an assistant, servant, or agent not to compete with his master or employer after the expiration of his time to service”).

⁷² *Village Voice Media, LLC*, 2003 WL., at 20.

⁷³ 15 U.S.C.S. § 1.

⁷⁴ Caswell O. Hobbs, III, “Efficiency,” “Cost-Benefit” and Other Key Words – *The Practical Uses of Economics at the FTC: Panel Discussion*, 51 Antitrust L.J. 589 (1982).

In January of 2003, Stericycle and Browning-Ferris Industries settled federal antitrust claims of territory allocation. The lawsuit alleged that in 1997 there was a formal agreement between the two companies to exchange customers, equipment, and employees. Stericycle became the primary provider of medical waste disposal services in Arizona, and Browning-Ferris Industries took over Colorado and Utah. The agreement that was struck required the payment of a civil penalty, investigation costs, and contribution to a fund to increase competition in the medical waste disposal industry in this region. Additional terms of the agreement include no future territorial allocations will be made between the competitors, the limited use of long term contracts with customers, and allowing haulers access to use Stericycle's incinerator in Utah for a fee.⁷⁵

F. Criminal liability upon proof of *per se* violation

1. Persons potentially liable

Individuals, corporations, and associations may all be liable for antitrust violations.⁷⁶

The directors of a corporation may be held liable for antitrust actions that they authorized.⁷⁷ A partnership is also considered a *person* under the Sherman Act and can therefore also be held criminally liable for antitrust violations.⁷⁸ Additionally, labor unions are considered to be a *person* under the statute⁷⁹ but the United States government, its agencies, and employees in their official capacity are not *persons* as defined in the Sherman Act and therefore not subject to antitrust prosecution.⁸⁰

⁷⁵ Utah Attorney General, *A.G. Obtains Consent Decree To Enhance Competition in Medical Waste Industry* <<http://attorneygeneral.utah.gov/PrRel/prjan132003.htm>> (Jan 13, 2003).

⁷⁶ 15 U.S.C.A. § 7 (2004).

⁷⁷ 15 USCS § 24; *United States v Wise*, 370 US 405, 409 (1962).

⁷⁸ *Western Laundry & Linen Rental Co. v United States*, 424 F2d 441, 449 (9th Cir. 1970).

⁷⁹ *United States v B. Goedde & Co.*, 40 F Supp 523, 528 (DC Ill. 1941).

⁸⁰ *United States v. Cooper Corp.*, 312 U.S. 600, 606 (1941); *Rex Systems, Inc. v Holiday*, 814 F2d 994, 997 (4th Cir. 1987).

2. Elements, standards of proof, burden of going forward, prima facie; defenses

In order for the Department of Justice to file charges, there must be a fifty percent chance of a jury finding the defendant guilty beyond a reasonable doubt. The Department of Justice should not pursue criminal action if there is no Federal interest from the prosecution, the person to be charged is subject to prosecution in another jurisdiction, or there is an adequate non-criminal alternative to prosecution.⁸¹

Defenses to criminal liability include: withdrawal from the conspiracy, statute of limitations, double jeopardy, single entity, respondeat superior, meeting competition, state action immunity, petitioning the government, regulated industries, and foreign commerce.⁸² In the case of double jeopardy, if the defendant makes a prima facie, non-frivolous showing that there was a single conspiracy, the burden shifts to the government to prove separate conspiracies based on a preponderance of the evidence.⁸³ A defendant may “rebut a prima facie case of price discrimination by showing that its discriminatory actions were taken in good faith to counter actions of a competitor.”⁸⁴

3. Penalties

The criminal penalties under the Sherman Act include both fines and jail time. The fine cannot exceed \$ 100,000,000 per count for corporations and \$ 1,000,000 per count for individuals. Prison time cannot exceed 10 years.⁸⁵

⁸¹ Department of Justice, *Transparency in Enforcement Maximizes Cooperation from Antitrust Offenders* <<http://www.usdoj.gov/atr/public/speeches/3952.htm>> (accessed July 30, 2004).

⁸² Krauze, *supra* n. 30, at 253-269.

⁸³ *Id.* at 255.

⁸⁴ *Id.* at 258-259.

⁸⁵ 15 U.S.C.S. §§ 1-2 (2004).

There has been an overall increase in the amount of jail time and fines. The Department of Justice reports that the average jail sentence for antitrust violations is 18 months. In 2002, a ten-year sentence imposed on a former Guam government official, for bid-rigging and other offenses involving FEMA-funded projects. The largest total amount of fines imposed against a company was \$ 500,000,000 against F. Hoffmann-La Roche for maintaining a vitamin cartel. The Department of Justice does offer leniency programs to encourage companies to come forward and cooperate with investigations and prosecution.⁸⁶

4. Policy – Evaluation of the net benefits of criminal enforcement

Criminal enforcement provides a disincentive to engage in antitrust activities and ultimately help protect consumers by reducing and eliminating such activities.⁸⁷ Clear rules and a reasonable probability of being punished for antitrust violations allows for better criminal enforcement.⁸⁸ The Department of Justice increases the chances of catching violators with the prosecutorial system and grand jury investigations involved in the criminal enforcement process.⁸⁹

The fact that an individual's liberty is at risk when engaging in antitrust violations makes enforcement more effective. In the past when only money was involved, the fines or damages might not have been enough to provide incentive to avoid antitrust violations.

⁸⁶ Department of Justice, *Status Report: An Overview Of Recent Developments In The Antitrust Division's Criminal Enforcement Program* <<http://www.usdoj.gov/atr/public/guidelines/202531.htm>> (accessed July 30, 2004).

⁸⁷ Department of Justice, *Antitrust and the Consumer* <http://www.usdoj.gov/atr/public/div_stats/9142.htm> (accessed July 30, 2004).

⁸⁸ Donald I. Baker, *Pyrrhic Victories? Reexamining the Effectiveness of Antitrust Remedies in Restoring Competition and Deterring Misconduct*, 69 *Geo. Wash. L. Rev.* 693, 697 (October/December 2001).

⁸⁹ *Id.*

Criminal enforcement targets the worst antitrust conduct and helps ensure consumers receive fair prices in the marketplace.

III. Sherman Act § 2

§ 2 of the Sherman Act makes monopolization, or attempts at monopolization, a felony.⁹⁰

The reasoning behind this section is to prevent the underutilization of resources and rising prices that accompany monopolization.⁹¹ Like § 1, § 2 of the Sherman Act requires the action to be part of interstate commerce. An important fact about § 2 of the Sherman Act is that it does not make being a monopolist unlawful, only acts of intentionally becoming a monopolist are wrong.⁹²

A. § 2 offenses:

1. Elements of Monopolization

The two basic elements of monopolization are (1) possession of monopoly power in the relevant market and (2) the willful acquisition of monopoly power.⁹³ To monopolize is to conspire to intentionally control trade in a particular product or service to a point that the conspirators can exclude real or potential competitors from the market.⁹⁴ A conspiracy to monopolize requires proof of an intentional, concerted action specifically intended to achieve a monopoly and the commission of at least one overt act in furtherance of the conspiracy.⁹⁵

2. Elements of Attempt to Monopolize

⁹⁰ 15 U.S.C.S. § 2.

⁹¹ *Areeda*, *supra* n. 33, at § 111f2.

⁹² *Sullivan*, *supra* n. 26, at 72.

⁹³ *United States v. Grinnell Corp.*, 384 U.S. 563, 570-571 (1966).

⁹⁴ *American Tobacco Co. v. United States*, 328 U.S. 781, 784-785 (1946).

⁹⁵ *Todorov v. DCH Healthcare Auth.*, 921 F.2d 1438, 1460 (11th Cir. 1991) (Defendant hospital was found to not have conspired to exclude the plaintiff radiologist).

Attempt to monopolize a market means the use of methods that have a dangerous probability of success of forming a conspiracy to achieve a monopoly.⁹⁶ An attempt to monopolize can occur when a company uses its monopoly power to eliminate any threatening competition.⁹⁷ The party attempting to monopolize must have the power and intent to exclude another party from competition along with an actual scheme to exclude the other party.⁹⁸ The elements of attempt to monopolize can be found in *CAT Industrial Disposal* where the court stated there must be “(1) specific intent to accomplish the illegal result, and (2) a dangerous probability that the attempt will be successful.”⁹⁹

3. Elements of Monopoly Maintenance

The antitrust laws prohibit the deliberate maintenance of monopoly power.¹⁰⁰ In addition to the possession of market power and willful acquisition of monopoly power requirements, there must also be anticompetitive act exerted to maintain the monopoly.¹⁰¹ Anticompetitive acts generally include exclusion. Exclusionary behavior tends to reduce the opportunities of competitors and does not further competition on the merits.¹⁰² Exclusion, or refusal to deal, is not however anticompetitive if there is a valid reason for such behavior.¹⁰³ On the other hand, a concerted refusal to deal is considered a group boycott and is illegal *per se*.¹⁰⁴ “No damage can flow from a lawful business or

⁹⁶ *American Tobacco Co.* 328 U.S., at 785.

⁹⁷ *Lorain Journal Co. v. United States*, 342 US 143, 154 (1951) (The only newspaper in a city refused to accept advertising from parties also advertising on the local radio station and this activity was found to be an attempt to monopolize and a violation of § 2 of the Sherman Act).

⁹⁸ *Gough v. Rossmoor Corp.*, 487 F.2d 373, 376 (9th Cir. 1973).

⁹⁹ *C.A.T. Industrial Disposal, Inc. v. Browning Ferris, Inc.*, 704 F. Supp. 120, 121 (W.D. Tex. 1989) *aff'd*, *C.A.T. Indus. Disposal, Inc. v. Browning-Ferris Indus., Inc.*, 884 F.2d 209 (5th Cir. Tex. 1989) (citing *Swift Co. v. United States*, 196 U.S. 375, 396, 49 L. Ed. 518, 25 S. Ct. 276 (1905)).

¹⁰⁰ *Mishawaka v. American Electric Power Co.*, 465 F. Supp. 1320, 1331-1332 (N.D. Ind. 1979).

¹⁰¹ *Grinnell Corp.*, 384 U.S., at 570-571.

¹⁰² Philip E. Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application*, vol. 3A, § 810 (Aspen Publishers 2002).

¹⁰³ *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 596 (1985).

¹⁰⁴ *Computer Place, Inc. v. Hewlett-Packard Co.*, 607 F. Supp. 822, (ND Cal 1984), *aff'd*, 779 F.2d 56 (9th Cir. 1985).

commercial transaction in which a person or corporation had a right to engage or from the refusal to sell to a person where such refusal was, as matter of law, wholly within the power and voluntary choice of the seller or dealer.”¹⁰⁵ In order to prove a monopoly maintenance case, a causal link must be shown between the anticompetitive behavior and the actual maintenance of the monopoly.¹⁰⁶

B. Per se cases

1. Tying

A tying arrangement is when one product is sold only on the condition that a customer will buy another product from the seller.¹⁰⁷ A tying arrangement may also occur when a seller conditions a sale on the basis that the buyer will not buy the product from a competitor.¹⁰⁸ The Court in *Northern Pacific Railroad Co.* found that such tying arrangements serve no purpose but to eliminate competition and deny competitors access to the market.¹⁰⁹ The seller’s market power is directly related to the anticompetitive effects of the tying arrangement.¹¹⁰ The elements of an illegal tying arrangement include (1) the existence of a tie where two markets are involved, (2) existence of market power in the tying market, and (3) evidence of exclusion in the tied market.¹¹¹ A monopolist in one market can create a monopoly in another market using a tying arrangement,

¹⁰⁵ *Eastman Kodak Co. v Blackmore*, 277 F. 694, 698 (2nd Cir. 1921).

¹⁰⁶ *United States v. Microsoft Corp.*, 253 F.3d 34, 78 (D.C. Cir.) (The court held that Microsoft illegally maintained its monopoly over the internet browser market by tying this browser to its Windows operating system)

¹⁰⁷ *Northern P. R. Co.* 356 U.S., at 5.

¹⁰⁸ Sullivan, *supra* n. 26, at 387.

¹⁰⁹ *Northern P. R. Co.*, 356 U.S., at 6.

¹¹⁰ Sullivan, *supra* n. 26 at 402.

¹¹¹ Raymond A. Atkins, *An Economic Model of Tying: Obtaining a Firstmover Advantage*, 5 Geo. Mason L. Rev. 525, 535 (Spring 1997).

essentially extending its market share into another market (also known as the *leveraging theory*).¹¹²

Tying arrangements make it difficult for a buyer to make a decision on which product to purchase and reduce market opportunities for competitors.¹¹³ Tying arrangements can be used to evade maximum price rules and to allow cartel practices.¹¹⁴ Although some tying arrangements are anticompetitive, most bundled sales have procompetitive results when checked by competition.¹¹⁵

2. Application of tying theory to Medical Waste industry

In the medical waste industry, one place where tying arrangements may occur is with sharps containers. Sharps containers along with collection, disposal, and hauling services may all be sold as one package. Within this mix of products and services, it is possible that one product or service may be tied to another, such as requiring a consumer to purchase sharps containers as a condition of buying hauling and disposal services.

According to the National Solid Wastes Management Association, there has not been any documented experience with such tying arrangements, but some companies have attempted to sell sharps containers “approved” by government agencies where approval is neither granted nor required.¹¹⁶

The disposal of medical waste could easily be tied to hauling. Since disposal facilities are all owned by private companies, the owner of the facility may attempt to tie its

¹¹² *Id.* at 525.

¹¹³ Sullivan, *supra* n. 106, at 387.

¹¹⁴ *Id.* at 387.

¹¹⁵ *Id.* at 388.

¹¹⁶ Interview with Alice Jacobsohn, Director, Public Affairs and Industry Research, National Solid Wastes Management Association (July 26, 2004).

hauling services to disposal.¹¹⁷ Such tying arrangements become more likely when disposal facilities and alternatives are limited. It is possible that the owners of disposal facilities could force consumers to use products and/or services that could be obtained elsewhere.

C. Rule of Reason case:

1. Price Squeeze Vertically Integrated operator initiates price squeeze

The term price squeeze occurs in a vertically integrated company that sets upstream (wholesale) prices so high that its customers cannot compete with its low, downstream (retail) prices.¹¹⁸ A price squeeze situation does not establish a *per se* antitrust violation.¹¹⁹ In order to establish a Sherman Act § 2 violation under a price squeeze theory, it must be shown that the defendant has monopoly power in the first level of the industry, the price charged by the defendant in the first level of the industry is more than a fair price, and the price charged in the second level of the industry is so low that competitors cannot realistically match that price and survive.¹²⁰

2. Application of price squeeze theory to Medical Waste industry

In the medical waste disposal industry, a company like Stericycle may own incineration or other disposal facilities. In the same geographic market, the company may also provide pickup and transportation services. This situation is analogous to the wholesale and retail situation found in traditional price squeeze cases. Stericycle could offer lower prices to its pickup and transport customers while charging higher prices to its competitors to use its incineration and disposal facilities.

¹¹⁷ *Id.*

¹¹⁸ Julian O. von Kalinowski, Peter Sullivan and Maureen McGuirl, *Antitrust Laws and Trade Regulation* § 27.04 (2d ed. 2004).

D. Application of § 2 of the Sherman Act to the Medical Waste Industry

When a firm becomes dominant in an industry there is a chance that this company will use its power to create a monopoly. Actions such as denying third-party haulers access to incinerators may be considered consistent with an attempt to monopolize. Access to facilities like incinerators is essential to the survival of small operators in the medical waste disposal industry.¹²¹ Other actions by the dominant firm to interfere with competitors' ability to engage in their business would be attempts to monopolize.

E. Case study: Tri-State private litigation against Stericycle

A class action suit was brought against Stericycle and Browning-Ferris Industries in January 2004.¹²² Most recently, a motion to dismiss was submitted. In the complaint, the plaintiffs alleged the existence of a conspiracy to allocate customers, territory, monopolize markets, commit unlawful practices restraining competition, and increase prices to consumers of medical waste services in Arizona, Colorado, and Utah.¹²³ The members of the class alleged that they were charged supra competitive prices for medical waste services.¹²⁴

¹¹⁹ *Juliano v. Sun Ref. & Mktg. Co.*, 1997 U.S. Dist. LEXIS 24140 (E.D. Pa. Feb. 28, 1997).

¹²⁰ *Aluminum Co. of America v. United States*, 148 F.2d 416, 437-438 (2nd Cir. 1945).

¹²¹ The essential facilities doctrine may apply in the medical waste disposal industry. Essential facilities are often encountered with utilities, but because of the high costs and regulations for incinerators, an argument could be made that such plants are essential facilities. In order to invoke the essential facilities doctrine, a monopolist must have control over the essential facility, the competitors must have an inability to reasonably duplicate the essential facility, the monopolist must deny the use of the essential facility to the competitors, and the monopolist must have the feasibility to provide the use of the essential facility. *MCI Communications Corp. v. American Tel. & Tel. Co.*, 708 F.2d 1081, 1132-1133 (7th Cir. 1982).

¹²² Pl.'s Compl. ¶ 1 (Jan. 16, 2004).

¹²³ *Id.* at ¶¶ 1-3.

¹²⁴ *Id.* at ¶ 6.

The plaintiffs referred to a 1997 market division agreement between Stericycle and Browning-Ferris Industries to stop competition in the three above-mentioned states.¹²⁵ Under the 1997 agreement, Stericycle acquired all of Browning-Ferris Industries' customers in Arizona while Browning-Ferris Industries acquired all of Stericycle's customers in Colorado and Utah.¹²⁶ The plaintiffs also referred to a settlement between Stericycle and the Arizona Attorney General with similar antitrust charges in August of 2002 and a settlement between Stericycle, Browning-Ferris Industries and the Utah Attorney General in January of 2003.¹²⁷ The specific causes of action pursued by the plaintiffs include: agreement to allocate customers in restraint of trade, agreement to divide geographic territory in restraint of trade, monopolization of the market, unlawful attempt to monopolize, unlawful merger and/or acquisition, and state antitrust violations.¹²⁸

Stericycle filed a motion to dismiss and alleged that the plaintiffs' claims were barred by the statute of limitations and sufficient facts were not alleged to support the claims.¹²⁹ Stericycle also alleged that the claim regarding 1997 agreement was legally and factually defective because unilateral market power and exclusionary conduct were not alleged and the shared monopoly approach lacks a legal basis.¹³⁰

IV. Clayton Act § 7 Merger and Acquisitions

A. Description of the statute and basis for private right of action

¹²⁵ *Id.* at ¶ 28.

¹²⁶ *Id.* at ¶¶ 28-29.

¹²⁷ *Id.* at ¶ 28.

¹²⁸ *Id.* at ¶¶ 50-81.

¹²⁹ Def.'s Motion to Dismiss ¶ 2 (Feb. 17, 2004).

¹³⁰ Def.'s Reply Memorandum in Support of its Motion to Dismiss, pages 18-20 (April 30, 2004).

Under § 7 of the Clayton Act, mergers that may substantially lessen competition or tend to create a monopoly are prohibited.¹³¹ Market power must be shown while proving a case under the Clayton Act, however, the proof required is less than under § 2 of the Sherman Act. Furthermore, it is not necessary to prove that the new entity will likely commit a future antitrust violation under the Clayton Act. The Clayton Act is the core of merger enforcement and allows for enforcement by the Department of Justice, Federal Trade Commission, state attorney generals, and private parties.¹³²

In a private antitrust action, the complaining party may seek monetary (including treble damages), injunctive and declaratory relief, and attorney's fees. In order to win a private antitrust action, the complaining party initially must show an injury to his/her property or business by anything prohibited under antitrust laws. After this initial showing has been made, the complaining party must also show causation, antitrust injury and proper standing.¹³³

B. Mergers in a highly concentrated industry could raise antitrust concerns

When a market is highly concentrated, there is a greater risk of collusion and anticompetitive effects.¹³⁴ If an industry is already highly concentrated, a merger, especially between firms with any significant portion of market share, will further concentrate the industry. Methods like the four figure concentration share and the

¹³¹ 15 U.S.C.A. § 18 (2004).

¹³² Sullivan, *supra* n. 26 at 513.

¹³³ Joseph P. Bauer, Multiple Enforcers and Multiple Remedies: Reflections on the Manifold Means of Enforcing the Antitrust Laws: Too Much, Too Little, or Just Right? 16 Loy. Consumer L. Rev. 303, 309 (2004).

¹³⁴ Sullivan, *supra* n. 26, at 591.

Herfindahl-Hirschman Index (HHI) may be used to determine the level of concentration in an industry.¹³⁵

If the HHI is high enough there will be a *prima facie* case against the merger. The defendant may rebut the case by showing that the merger will not lessen competition, there will be gains in efficiency, and innovation will result. A case may be made that competition will not lessen by showing the companies were not competitors, there are substitute products, or that the relevant market was not properly defined in creating the HHI.¹³⁶

Not all mergers in highly concentrated industries raise concern, such as in *United States v. General Dynamics Corp.*¹³⁷ Even though the merged coal mining company had a high market share; the fact that the company had low reserves meant that it could not continue with its current level of output.¹³⁸ In this case the market concentration figures were not an accurate measure of strength and possible anticompetitive effects.

C. Application of § 7 of the Clayton Act to the Medical Waste Industry

The fact that the medical waste disposal industry is so concentrated would mean that mergers within that industry might tend to lessen competition or create a monopoly. Mergers between the largest player Stericycle and others within the industry would be of greatest concern. High barriers to entry, including startup costs and regulations, within this industry would make it difficult for new entrants to develop and challenge dominance of a large firm like Stericycle.

¹³⁵ *Id.* at 67.

¹³⁶ *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 716 (D.C. Cir. 2001).

¹³⁷ Sullivan, *supra* n. 26, at 594.

D. Case Study: Tri-State private litigation against Stericycle

The plaintiffs in the Stericycle case allege that there was a merger in violation of § 7 of the Clayton Act.¹³⁹ In its motion to dismiss, Stericycle questioned the allegations regarding the merger, since the government approved the merger.¹⁴⁰ Stericycle went on to state that there was not an increase in concentration in the market as a result of the 1999 merger.¹⁴¹ This allegation was based on BFI not being a competitor in Arizona before or after the merger and Stericycle did not operate in Arizona, Colorado, or Utah before the merger.¹⁴² Additionally, Stericycle claimed that no numeric basis for the concentration claim was offered nor did the plaintiffs establish an antitrust injury.¹⁴³

V. Conclusions

Territorial allocations are illegal *per se* and should not be permitted under the antitrust laws. A highly concentrated industry, like the medical waste industry, should be watched carefully to ensure that competition survives. The medical waste disposal industry, like other highly concentrated markets, has a higher probability of collusion. Transactions therefore should be scrutinized for warning signs such as ancillary restraints. The Sherman Act and subsequent court opinions give guidance on what behavior is illegal. Furthermore, the Clayton Act provides and understanding of how mergers should be examined and should be used to prevent further concentration in the medical waste disposal industry.

¹³⁸ *United States v. General Dynamics Corp.*, 415 U.S. 486, 508 (1974).

¹³⁹ Pl.'s Compl. ¶¶ 71-75 (Jan. 16, 2004).

¹⁴⁰ Def.'s Motion to Dismiss ¶ 2 (Feb. 17, 2004).

¹⁴¹ Def.'s Reply Memorandum in Support of its Motion to Dismiss, 22 (April 30, 2004).

¹⁴² *Id.* at 23.

¹⁴³ *Id.* at 25-26.