

the Center for a Competitive Waste Industry

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# **Projected Impacts on Competition from the Merger of Republic Services and Allied Waste**

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November 14, 2008

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## Abbreviations

AWI	Allied Waste Industries
BFI	Browning Ferris Industries
C&D	Construction and demolition wastes
DOJ	U.S. Department of Justice
EPA	U.S. Environmental Protection Agency
HHI	Herfindahl-Hirschman Index
HSR	Hart-Scott-Rodino Amendments to the Clayton Act
ITW	In the wings
MRF	Material recovery facility
NAAG	National Association of Attorneys General
RSG	Republic Services
WBJ	Waste Business Journal
WMI	Waste Management

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## ☀ Executive Summary

Over the past four decades, the large vertically integrated waste companies have been implementing their long term business model to consolidate the industry. Since about 1990, this plan has focused on control over landfills in order to gain market power by creating insurmountable barriers to entry.

Republic Services, the third largest waste company, is now proposing to merge with Allied Waste, the second largest, to effectively create a two-firm oligopoly in many local markets.

Seventy-eight local markets analyzed in this report have Herfindahl-Hirschman Index values – a measure of market concentration – greater than 1800, which the Department of Justice’s rules indicate is “highly concentrated.” Those 78 markets average an HHI of 3107, which is almost twice that needed to be highly concentrated. Also, fourteen markets have HHI values greater than 4,000, four more than 5000, one over 6000 and one beyond 7000. Presumptively, these markets will experience significant price increases above free market rates if the merger is completed.

In the waste industry in particular, these high concentration levels for disposal will provide further avenues to market power via price squeezes. When there are bottleneck functions in an industry that are controlled by dominant firms – such as landfills where every hauler’s garbage truck must dump at day’s end – smaller companies without their own landfill assets are vulnerable. The major firms that tightly control those landfills can charge independent haulers more to dump than they internally bill themselves, thereby price squeezing competition out of the market. As the number of firms in the oligopoly decline, price followship rises dramatically, new entry is punished, and significant price increases are imposed.

Past regulatory practice in prior waste industry mergers has been to permit the combination subject to conditions intended to lessen their anti-competitive impacts. However, these efforts have failed to preserve competitive conditions in affected markets, and therefore, at a minimum, if the merger is not opposed, new remedial strategies are needed. Specifically, that includes the right of independent haulers to competitively contract for the long term for airspace at the combined firm’s landfills, and a bar to abusive evergreen contracts.

## ✱ Introduction .

The waste industry has employed a succession of strategies to consolidate the once fragmented sector into the hands of a few national and regional publicly traded corporations since 1970. After two decades of acquisitions of thousands of small privately-held firms, the early 1990's saw mergers among many regional companies. Then, the end of the decade saw the first wave of mega-mergers among the major publicly-traded firms that dramatically ramped up the pace of consolidation. Third ranked USA Waste merged with the number one firm, Waste Management (WMI), and fourth ranked Allied Waste (AWI) combined with number two, Browning Ferris Industries (BFI).

In an effort to reduce the anti-competitive impacts of consolidation among the four leading firms, the U.S. Department of Justice (DOJ) and attorneys general from several states (AGs) required the merging companies to divest certain landfill, transfer and hauling assets in a handful of the affected markets, 13 in the first case and 14 in the second.<sup>1</sup> Most of the divested assets were from a list submitted by the merging companies and were sold to Republic Services (RSG).<sup>2</sup> It used those acquisitions to become among the three largest waste companies today, and be in a position to effectively takeover the second ranked firm.<sup>3</sup>

*"In summary, 78 local markets out of 96 examined in 10 states would presumptively exhibit sufficiently high concentration of disposal volumes or landfill capacity following the RSG/AWI merger that would be likely to increase market power sufficiently to be of concern to federal and state regulators."*

For a number of years following, accounting scandals precluded more major mergers and acquisitions. But, an alternative was found as the leading firms engaged in more than a hundred asset swaps as a supplemental means of

consolidating without requiring capital outlays. In asset swaps, the second largest firm in a market exited that area in exchange for the assets where that first ranked firm trailed. Again, some overlapping assets were required to be divested by regulators largely from lists provided by the merging companies.

This year, competing mergers first by Republic and later by Waste Management have been proposed. In June, Republic Services proposed to merge with Allied Waste. After that offer met resistance in the market, Waste Management in July made a hostile bid for Republic, which aborted in October due to tight credit markets, Republic's recently adopted poison pill and refusal to submit to due diligence.<sup>4</sup>

The remaining Republic-Allied merger cannot close until after it has been reviewed by DOJ under the Hart-Scott-Rodino Amendments (HSR) to the Clayton Act. The process usually takes three to four months, and is expected to close by year's end. Also, there are parallel reviews by state attorneys general.

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<sup>1</sup> *U.S. v. USA Waste*, No. 98 CV 1616, Hold Separate Stipulation and Order (D.C.N.D. Ohio, July 23, 1998); *U.S. v. Allied Waste*, Case No. 1:99 CV 01962, Hold Separate Stipulation and Order (D.C.D.C., July 20, 1999).

<sup>2</sup> Bob Brown, "Haulers Make Bids for Merger Assets," *Waste News* (September 21, 1998).

<sup>3</sup> Securities & Exchange Commission, Forms 10-K for WMI, AWI and RSG.

<sup>4</sup> Securities and Exchange Commission, Form 14-A for RSG (October 14, 2008).

Merger reviews are intended to assess whether the combination is likely to create or enhance market power or to facilitate its exercise. If it is, the merger is either to be denied, or allowed to proceed but conditioned on some combination of structural remedies and conduct restrictions intended to restore competition to its pre-merger levels.

This paper describes the procedures used to review mergers, provides an analysis of the proposed Republic-Allied merger in ten states where overlapping assets have been previously identified, and proposes alternative remedies.

In summary, 78 local markets out of 96 examined in 10 states, or 81%, would presumptively exhibit sufficiently high concentration of disposal volumes or landfill capacity following the RSG/AWI merger that would be likely to increase market power sufficiently to be of concern to federal and state regulators. In the waste industry in particular, these high concentration levels for disposal will provide further avenues to market power via price squeezes.

## ☼ Merger Review Process .

### (i) Legal setting

To recapitulate the legal backdrop to the merger, the relevant antitrust laws are found in §1 and §2 of the 1890 Sherman Act, §7 of the 1914 Clayton Act, and, for reviewing major mergers, in the 1976 Hart-Scott-Rodino Amendments to the Clayton Act. Together, these statutes prohibit mergers that constitute unreasonable restraint of trade, create a monopoly or which may substantially lessen competition, and require pre-notification and a short window of time for an anti-trust review.<sup>5</sup>

The actual procedures used by the U.S. Department of Justice (DOJ) for evaluating the effect on competition from mergers are laid out in its Horizontal Merger Guidelines (DOJ Guidelines). Those states with parallel merger review authority have collectively issued their own, and stricter, procedures in their own National Association of Attorneys General guidance (NAAG Guidelines).<sup>6</sup>

Under the DOJ Guidelines, first a product and geographic market are determined.<sup>7</sup> Next, for that market, the Guidelines project the effect on competition of an increase in the merging firms' market shares based on the Herfindahl-Hirschman Index (HHI). The HHI calculation attributes disproportionately greater impacts from the combination of larger individual shares.<sup>8</sup>

### (ii) HHI calculation

The index does this mathematically by squaring (i.e., multiplying each share by itself) the market share of each firm competing in a market, and then summing the resulting squares. The HHI number can range from close to zero to 10,000. The closer a market is to being a monopoly, the higher the market's concentration. If, for example, there were only one firm in an industry, that firm would have 100% market share, and the HHI would equal 10,000 (100<sup>2</sup>), describing a monopoly. Or, if there were thousands of small firms competing, each would have nearly 0% market share, and the HHI would be close to zero, indicating nearly perfect competition.

In its merger reviews, the Department of Justice's Guidelines consider a market with an HHI after the merger of less than 1,000 to be a competitive marketplace of no further concern. If the resulting HHI is 1,000-1,800, it is presumptively thought to be a moderately concentrated marketplace, and 1,800 or greater to be highly concentrated. In a moderately concentrated market, a 100 point or more HHI increase due to the merger is considered likely to raise prices more than 5% for five or more years, and in a concentrated market, only a 50-point increase is necessary.

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<sup>5</sup> 15 U.S.C. §1, 2, 19 and 20.

<sup>6</sup> U.S. Department of Justice, *Horizontal Merger Guidelines* (1992; revised 1997)(DOJ Guidelines). On line at: <http://www.usdoj.gov/atr/public/guidelines/hmg.htm>. In practice, while both DOJ and the Federal Trade Commission have concurrent jurisdiction to review mergers, each has taken responsibility for specific industry sectors, with DOJ having purview over the waste industry. The National Association of Attorneys General has issued its own stricter, *Horizontal Merger Guidelines* (1987; rev.'93)(NAAG Guidelines) at [http://www.naag.org/assets/files/pdf/at-hmerger\\_guidelines.pdf](http://www.naag.org/assets/files/pdf/at-hmerger_guidelines.pdf).

<sup>7</sup> DOJ Guidelines at ¶1.1 to 1.2.

<sup>8</sup> DOJ Guidelines at ¶1.4 to 1.5.

However, in practice, according to an analysis by NAAG, DOJ only considers intervening with HHIs above approximately 2,500. Most states, on the other hand, may act when HHI levels exceed 1,800.<sup>9</sup>

Furthermore, without more evidence, merger theory no longer construes high market concentration as tantamount to a *per se* violation of the Clayton Act. The DOJ Guidelines discount those impacts from high concentration if there are low barriers to entry,<sup>10</sup> or a high price elasticity for the product.<sup>11</sup> For, without high barriers or low elasticity, any attempt to increase prices above the price that would be set in a free market may tend to be transient. Eventually, new entrants seeking to garner market share will drive prices down or customers will drift away. Also, DOJ permits strong arguments for efficiency gains to overcome anti-competitive concerns,<sup>12</sup> but the states, following case law,<sup>13</sup> generally do not.<sup>14</sup>

(iii) 3 to 2 firm oligopoly econometric study

In addition to the HHI analysis, the HSR review process would be improved if a industry specific econometric field study was performed to provide empirical data on whether the price for disposal is greater in local waste markets where two national firms are dominant than where three national firms are dominant, and also where independently or publicly owned landfills do not maintain a significant competitive presence in the disposal market. If there is a price impact, and it is significant, then more a more aggressive response to the merger may be necessary to prevent the merger from resulting in significant, non-transient price increases.

Wholesale landfill prices provided to large volume third parties would be the clearest indicator of market power. Since this data is proprietary and not publicly available, the study would have to be done by DOJ or the states, who presumably have this data as part of the merging firms response to the second data requests.

The first population studied would be metropolitan markets for disposal in which three national firms, each of whom control more than 15% of the market, and together control more than 50% of the landfills. That would be compared to a second group in which two national firms, each of whom control more than 15% of the market, and together control more than 50% of the landfills. Excluded from this population would be markets in which there are independently or publicly owned landfills that are available at fair prices to new private entrants and have more than 5 years of remaining life. The proportion of tons remaining of landfill capacity in independent hands would be an additional variable.

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<sup>9</sup> NAAG Guidelines, at p. 19, NOTES 34 and 35.

<sup>10</sup> DOJ Guidelines at ¶3.

<sup>11</sup> DOJ Guidelines at ¶1.11.

<sup>12</sup> DOJ Guidelines at ¶4.

<sup>13</sup> *F.T.C. v. Procter & Gamble*, 386 U.S. 568, 580 (1967); *U.S. v. Philadelphia National Bank*, 374 U.S. 321,371 (1963).

<sup>14</sup> NAAG Guidelines at ¶5.3.

## ✱ Procedures for Analysis .

Here there is no controversy: the product market involved in these mergers is for waste services for non-hazardous solid wastes, and the geographic market is a local market.

Drawing the actual lines for the local market, however, requires further considerations, specifically (i) the market that is the best indicator for future competition, (ii) the delineation of boundaries around the local markets, (iii) the choice of markets that have been analyzed, (iv) the landfill data that was used, (v) the way the HHI calculations are interpreted and (vi) potential competition that is in the wings but would be eliminated by the merger.

### (i) Disposal market best indicator of future competition

When assessing HHI values in the local market, the DOJ Guidelines call for shares to be computed from the best indicator of future competitive performance.<sup>15</sup> In the waste industry, this is indicated not by gross revenues, but instead by the disposal volumes flowing through transfer stations or taken directly to landfills.

This is because barriers to entry into the collection of garbage in the commercial sector are generally low, so long as anti-competitive conduct – such as abusive evergreen contracts and stealth pricing – are not countenanced. Qualified individuals with knowledge of the business can get “family & friends” loans to buy a few collection trucks in order to gain entry into the hauling business, often gaining an opening wedge with roll-off container collection in the parallel construction and demolition waste (C&D) market.

However, there is universal recognition that barriers into disposal have been exceedingly high since landfills first began being regulated. In 1991, the U.S. Environmental Protection Agency (EPA) promulgated the Subtitle D rules,<sup>16</sup> shuttering thousands of unregulated open dumps by its effective date in 1994.<sup>17</sup> Since a collection vehicle tops out once or twice each day and must unload in order to continue on route, access to landfills became a bottleneck in the industry after this happened. Because landfills are a bottleneck that exhibit high barriers to entry, market power flows from control over the landfills, and the market shares for disposal is the better indicator of future competitive significance in any merger analysis.

### (ii) Geographic market for disposal

Most often this market for disposal in a local area extends for 50 miles to 150 miles, which is generally outside the area bounded by the collection routes. The two areas diverged in the early 1990s when Subtitle D closed down the near-in open dumps close to the routes. The new generation of landfills tended to be sited farther out past the built-up suburban areas surrounding the cities. Shutting down the open dumps and shifting disposal to far-away regional sites led to the construction of transfer stations. These were designed to economically reach the farther out landfills by transferring wastes in and around the cities from stop-and-go packer vehicles to long haul tractor-trailers.

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<sup>15</sup> DOJ Guidelines at ¶1.41.

<sup>16</sup> 56 FEDERAL REGISTER 96, at pp. 50978-5119 (October 9, 1991), which created 40 C.F.R. Part 258, acting under Subtitle D of the Hazardous and Solid Waste Amendments of 1984.

<sup>17</sup> Environmental Industry Associations, *Solid Waste Disposal Trends: 1999 Update* (2000).

However, while disposal was no longer necessarily within the same geographic market for collection, there is a limit on how far the associated disposal market can extend. For the long haul tractor trailers to go to and return from these distant facilities in one day, the longest over the road distance was usually about 150 miles.<sup>18</sup>

There are exceptions. In New York City (NYC), after the near-in Fresh Kills landfill on Staten Island was shut down in 2000, municipal trash has had to be transferred to landfills that are primarily in other states. When available regional landfills around Philadelphia 100 miles from NYC began filling up, extra long over-the-road hauling sometimes extended long haul truck trips for several hundred miles as far as Ohio and Virginia. Because this meant one driver could not make a complete return trip in one day, the result was a greater cost per mile. At some point, the alternative of rail haul, even with the additional costs for containerization, becomes the most economical option after landfills are no longer available within the 200-mile radius that is more conveniently reachable by trailers. If the proposed marine transfer stations meant to containerize municipal and commercial wastes are incorporated in New York's sunk disposal costs, that could extend the indicator market for hundreds of miles.

To the opposite point, in other areas such as the San Fernando Valley or the Sunshine Canyon landfills, the sites exist inside or astride municipal boundaries. That eliminates the need for some transfer operations for the parts of the congestion-bound areas closest to these landfills.

Nonetheless, in the more typical case the disposal market usually does not reach much past 100 miles, which is what is used in this analysis to provide an overall picture of the extent that the mergers can be expected to impact competition in the markets where the two firms overlap. In many cases, the actual market does not extend that far, and the concentration values in a 100-mile radius in most cases probably understate the true market picture.

Of course, the precise contours of the geographic market remain to be drawn based upon actual conditions as to which landfills (and in some large congested cities, transfer stations) can actually be used by private commercial haulers in an area to dispose of the commercial wastes that they collect. In addition to a more exact delineation, the disposal facilities within it would need to be evaluated for other factors that can limit their influence on competition in the future.

As examples, some facilities operate under legal or political constraints on whose wastes they can accept, functionally putting them outside the competitive market. Other independently or publicly owned landfills that will soon close have less ability to prevent the threat to competition than those with ample capacity. Today, the Los Angeles (LA) Sanitation District has the region's low cost site at its massive Puente Hills landfill east of LA, and that has had a major impact on blocking the oligopoly's exercise of market power. However, in 2013, Puente Hills will be closed and replaced by the distant Mesquite Landfill that requires expensive rail haul to reach in Imperial County. Long hauls will at least triple District's costs from \$25 to \$75 per ton, disadvantageously transforming the District into the high cost provider over Republic's Chiquita and Waste Management's El Sobrante landfills immediately north of the city. This will precipitously tip the balance of market power in favor of the private sector's waste oligopoly.<sup>19</sup>

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<sup>18</sup> At an average speed of 45 miles per hour, the on-the-road time would be about 6 hours and 40 minutes. Loading and unloading times will vary but will approximate 2 hours, to which must be added break time. The total time will be around 10 hours, but will vary with local conditions and operators.

<sup>19</sup> Los Angeles County Solid Waste Management Committee, Minutes of July 19, 2007, at p. 7.

Similarly, independent landfills significantly further than most other sites from the collection routes, and therefore are more expensive to reach, will also provide less relief from those challenges. Moreover, with rising diesel fuel prices, the additional costs to reach less strategic sites at the furthest perimeter of the geographic market may add \$5-10 per ton to loads that must be long hauled compared to reaching closer facilities.

For all these reasons, in general, the 100 mile contour line will tend to be conservative in representing actual concentration in a local market because some landfills nominally inside the market's border do not actually act to maintain competition and others may soon be closed.

To compute the HHIs of disposal shares in each local market, we used the major metropolitan statistical areas in which the merging firms have overlapping disposal assets (as the focus of the geographic market) and then recorded those facilities within 100 miles of each area.

### (iii) Markets analyzed

In general, the largest 10 local markets were examined in the 10 states where substantial overlapping assets among the merging firms have been reported. The states are: California, Georgia, Illinois, Indiana, Michigan, North Carolina, Ohio, Pennsylvania, Texas and Wisconsin, as shown in FIGURE 1.<sup>20</sup>

The 96 major metropolitan areas, along with their populations, that were examined within those states are listed in TABLE 1.

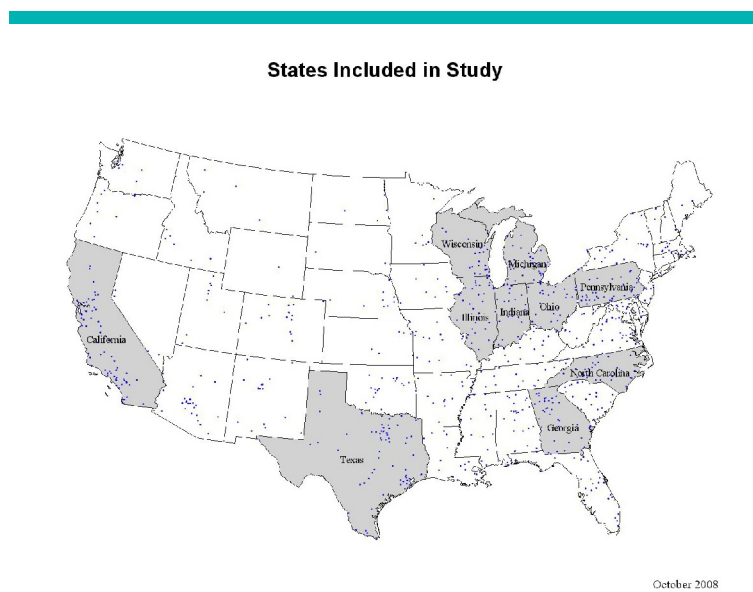


FIGURE 1

<sup>20</sup>

Lehman Brothers, *Allied Waste-Republic Services: Antitrust & Merger Analysis* (July 1, 2008), at p.7-9.

METROPOLITAN AREAS USED IN ANALYSIS						
State	Market	Pop. 2005	State	Market	Pop. 2005	
<b>CALIFORNIA</b>	Bakersfield	735,377	<b>OHIO</b>	Akron, OH	710,062	
	Fresno	876,451		Canton-Massillon	408,409	
	LA-Long Beach-Santa Ana	13,061,361		Cincinnati-Middletown, OH-KY-IN	2,085,092	
	Modesto	506,719		Cleveland-Elyria-Mentor	2,147,472	
	Riverside-San Bernardino-Ontario	3,781,349		Columbus	1,768,016	
	Sacramento-Arden-Arcade-Roseville	2,057,382		Dayton	852,403	
	Salinas	422,692		Manassas	127,516	
	San Diego-Carlsbad-San Marcos	3,053,302		Springfield	142,749	
	San Francisco-Oakland-Fremont	4,311,814		Toledo	664,986	
	Stockton	652,654		Youngstown-Warren-Bardonia, OH-PA	591,508	
<b>GEORGIA</b>	Atlanta-Sandy Springs-Marieetta	4,980,447	<b>PENNSYLVANIA</b>	Allentown-Bethlehem-Easton, PA-NJ	781,430	
	Augusta-Richmond County-SC	522,838		East Stroudsburg	158,083	
	Chattanooga, TN-GA	498,385		Erie	280,455	
	Columbus, GA-AL	293,097		Harrisburg-Carlisle	523,978	
Savannah	315,276	Lancaster		492,560		
<b>ILLINOIS</b>	Bloomington-Normal	162,270		Philadelphia-Williamsport, PA-NJ-DE-MD	5,848,871	
	Champaign-Urbana	220,713		Pittsburgh	2,419,053	
	Chic-Naperville-Joliet, IL-IN-WI	9,538,483		Reading	390,590	
	Davenport-Moline-Rock Island-IA-IL	375,212		Scranton-Wilkes-Barre	554,481	
	Decatur	112,175		York-Hanover	402,362	
	Effata-Streator	152,539	<b>TEXAS</b>	Austin-Round Rock	1,474,149	
	Peoria	368,491		Beaumont-Port Arthur	388,650	
	Rockford	338,273		Brownsville-Harlingen	371,824	
	Springfield	204,532		Corpus Christi	416,904	
	St. Louis, MO-IL	2,810,628		Dallas-Fort Worth-Arlington	5,908,048	
<b>INDIANA</b>	Bloomington	181,571		El Paso	729,625	
	Chic-Naperville-Joliet-IL-IN-WI	9,538,483		Houston-Sugar Land-Baytown	5,401,565	
	Elkhart-Goshen	193,927		Killeen-Temple-Fort Hood	357,148	
	Evansville, IN-KY	347,406		McAllen-Edinburg-Mission	668,127	
	Fort Wayne	404,591		San Antonio	1,896,223	
	Indianapolis-Carmel	1,647,784	<b>WISCONSIN</b>	Appleton	218,551	
	Lafayette	189,641		Duluth, MN-WI	279,241	
	Louisville/Jefferson Co., KY-IN	1,215,611		Eau Claire	157,374	
	South Bend-Mishawaka, IN-MI	321,820		Green Bay	301,681	
	Terre Haute	169,086		Janesville	157,789	
<b>MICHIGAN</b>	Ann Arbor	344,854		La Crosse, WI-MN	130,933	
	Detroit-Warren-Livonia	4,592,457		Madison	544,128	
	Flint	459,190		Milwaukee-Waukesha-West Allis	1,527,796	
	Grand Rapids-Wyoming	782,273		Oshkosh-Neenah	163,934	
	Holland-Grand Haven	261,436		Racine	194,134	
	Jackson	166,240	Wausau	131,133		
	Kalamazoo-Portage	328,487				
	Lansing-East Lansing	461,815				
	Muskegon-Norton Shores	177,800				
	Saginaw-Saginaw Township No.	211,136				
<b>N. CAROLINA</b>	Asheville	394,921				
	Charlotte-Gastonia-Concord, NC-SC	1,533,401				
	Durham	470,237				
	Fayetteville	350,261				
	Greensboro-High Point	684,005				
	Greenville	165,712				
	Hickory-Lenoir-Morganton	359,993				
	Raleigh-Cary	941,783				
Wilmington	310,400					
Winston-Salem	446,016					

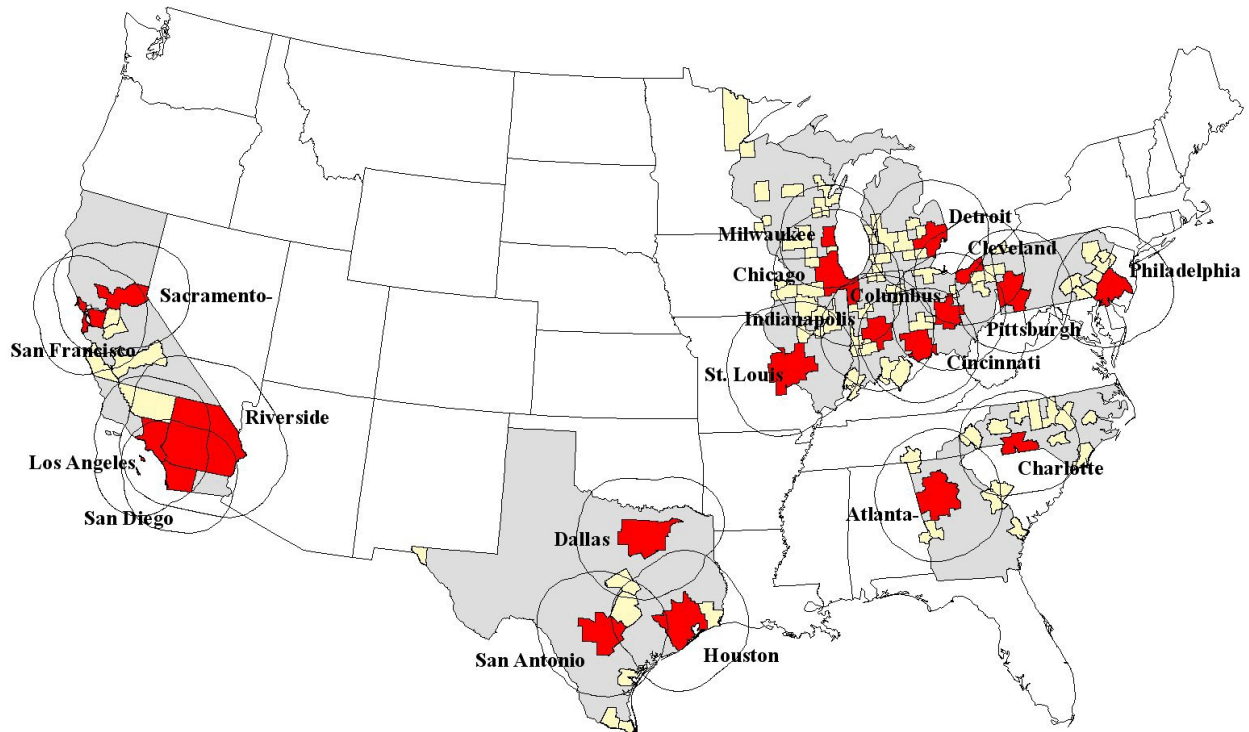
TABLE 1

FIGURE 2 shows the location of the twenty largest local markets in the states with identified overlapping assets in red, and their 76 smaller brethren in yellow. State-by-state maps with more detail are provided in the APPENDICES.

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## Metro Areas Included in Study

(100-mile Radius Displayed for 20 Largest Metro Areas)



October 2008

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FIGURE 2

Note that several of the contour lines delineating the disposal markets that surround a collection market overlap those that surround other collection markets. In this sense, there are effectively fewer *disposal* markets than *collection* markets were the consolidated areas combined. However, most of the types of remedies that have been imposed in the past, and others that we propose here, are geared to the collection market (*see* page 23). For that reason, notwithstanding the overlaps among the disposal markets, we use selected metropolitan areas as the benchmark for the local markets for waste services.

### (iv) Landfill data used

For data on landfill ownership and capacity in each metropolitan area, the Waste Business Journal's (WBJ) Disposal Data Base was used. The WBJ database provides information on every disposal facility in the U.S., including its ownership, tons per day (TPD) throughput, remaining capacity and the longitude and latitude of the facility. To focus on those landfills with the most significant impact on each market, we excluded those receiving less than 250 TPD.

Disposal can be assessed in two ways:

- The tons per day (TPD) received at each facility in some time period, or
- The remaining capacity at the facility.

Measuring HHI on a TPD basis emphasizes the current market relationships. When measured by ownership of the remaining disposal capacity, on the other hand, the focus is shifted to future conditions.

At times, remaining life can be more forward-looking because it has the capacity to reflect the diminished power in the case of those sites in some areas that are about to close.

Conversely, in regions with excess capacity overhanging the market— as is the case in many areas – those who currently control substantial waste flows also retain significant influence over the market. Because they are able to fill their sites faster with those greater flows, their revenues, which otherwise would be spread over years to come, are front ended with only minor increases in current operating expenses. Also, landfills without adequate waste flows may not have sufficient revenues to amortize their debt. In the case of a dominant firm, their control over greater current waste flows makes their current margins greater, along with their ability to threaten to discipline other waste firms who do not follow their price leadership.

For these complex reasons, both parameters are relevant for an analysis of market power. When either factor exceeded the HHI parameters for significance in an area, that market was indicated in this analysis as subject to increased market power from the merger.

#### (v) Basis of HHI calculations

From the resulting screening process, we generally computed the HHI values before and after the proposed merger on the basis of how many tons per day were received in 2007, and also the remaining life for landfills in the 96 metropolitan areas in California, Georgia, Illinois, Indiana, Michigan, North Carolina, Ohio, Pennsylvania and Wisconsin.

In general, those markets with a post HHI of more than 2500, when it is more than 50 points above the pre-HHI, are those which are most likely to arouse objection from DOJ. For many states, a post HHI of more than 1800 and delta of 50 will be sufficient to be of concern.

#### (vi) In the wings

In addition, 21 markets exhibit no change in HHI values after the merger, even though some of those markets show very high HHIs. Most of these markets are highly concentrated: it is just that the merger did not increase it further because one of the two merging firms is not presently in that market, even though they are potential entrants into the other's market.

This merger removes that other firm, now in the wings, which would otherwise continue to be capable of entering the market and increasing competition. Firms that are in the wings temper abusive practices. For a locally dominant firm is aware that the imposition of monopoly pricing could encourage other nearby companies, which have the capacity to do so, to enter that market. There are 19 markets with HHI values greater than 1800, in which the five major national firms are dominant by controlling more than 50% of landfill throughputs or capacity. These are also counted here as ones in which the proposed merger increases market power. Although no publicly available information exists to show one or the other is contemplating entering the other's market, that is only because regulators continue to approve mergers with token divestitures.

## ☼ Findings of HHI Analysis .

The HHI values for the 96 markets analyzed show very significant impacts on competition from the proposed merger of Republic and Allied. In summary, as shown in FIGURE 3, of the states reported to have overlapping assets due to the merger—

- 78 local markets are likely to experience significant and sustained increases in market power;
- 46 will do so under DOJ’s higher hurdle of an HHI of more than 2500;
- 59 will do so under the pattern of state AG’s mid-range threshold of an HHI of at least 1800; and

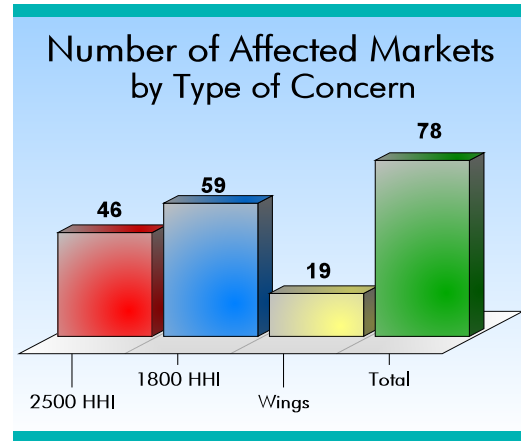


FIGURE 3

- Another 19, which were not otherwise identified as raising merger issues, may also be expected to see increases in market power due to a loss of potential competition that lies in the wings.

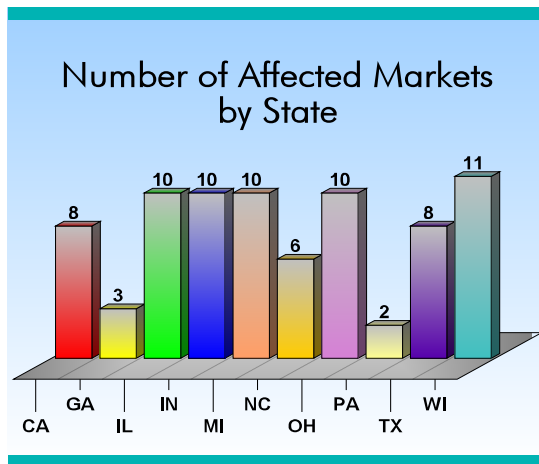


FIGURE 4

In order to see how this breaks down by state, FIGURE 4, in turn, breaks down by state the total number of markets impacted by each merger. Illinois, Indiana, Michigan, Ohio and Wisconsin have all of their 10 largest local markets impacted. California and Texas have the next most with 8 markets affected. Georgia, North Carolina and Pennsylvania, with 3, 6 and 2, respectively.

Finally, for each state, FIGURE 5 shows how many of the affected markets exhibit each of the three types of concerns, that is, either more than 2500 HHIs,

more than 1800 HHIs, or a loss of competition that is presently in the wings.

TABLE 2 on the next page shows which local markets in each of the 10 states examined meet the criteria for anti-trust concerns of either the DOJ or state Attorney Generals, or would experience the loss of competition presently in the wings if the Republic-Allied merger were completed.

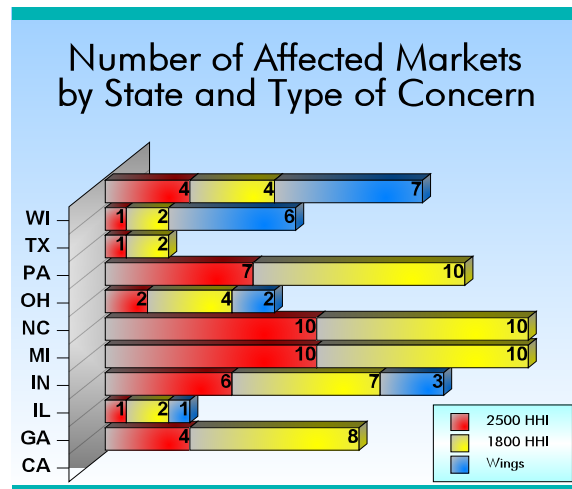


FIGURE 5

Local Markets Where Competition Will Be Impacted				
By State				
CALIFORNIA	GEORGIA	ILLINOIS	INDIANA	MICHIGAN
Fresno	Augusta	Bloomington	Bloomington	Ann Arbor
Modesto	Chattanooga	Champaign	Chicago	Detroit
Riverside	Savannah	Chicago	Elkhart	Flint
Sacramento		Davenport-Moline	Evansville	Grand Rapids
Salinas		Decatur	Fort Wayne	Holland
San Diego		Ottawa	Indianapolis	Jackson
San Francisco		Peoria	Lafayette	Kalamazoo
Stockton		Rockford	Louisville	Lansing
		Springfield	South Bend	Muskegon
		St. Louis	Terre Haute	Saginaw
N. CAROLINA	OHIO	PENNSYLVANIA	WISCONSIN	TEXAS
Durham	Akron	Erie	Appleton	Austin
Greensboro	Canton	Pittsburgh	Duluth	Beaumont
Greenville	Cincinnati		Eau Claire	Brownsville
Raleigh	Cleveland		Green Bay	Corpus Christi
	Columbus		Janesville	El Paso
	Dayton		La Crosse	Houston
	Mansfield		Madison	Killeen
	Springfield		Milwaukee	San Antonio
	Toledo		Oshkosh	
	Youngstown		Racine	
			Wausau	

TABLE 2

TABLE 3, which runs across pages 14 and 15, shows the pre- and post-merger landfill HHI concentration by state in the specific metropolitan areas where high levels were found based upon tons per day disposed of in the market in 2007, and also the remaining life that year.

Also shown is the difference, or delta value, between the pre- and post-merger HHI numbers. The 59 markets that are identified with anti-competitive impacts due to post-merger HHI values above 1800 – including the 46 of them that are also above 2500 – all have delta values greater than the 50 points, as also required by the Guidelines to raise anti-trust concerns. That means, of course, that the post-merger market is highly concentrated. It also means that the increase in the HHI value due to the merger is sufficiently large to attribute the anti-competitive conditions in that market to the merger, not to the pre-existing condition of the market.

The average of those HHI differences is 878 among the areas with HHIs calculated using tons per day, and 771 among those computed based upon remaining capacity. The low-to-high range of differences in the former case is 134 to 1961, and in the latter case, 51 to 234.

To highlight those markets which are of concern, a red dot is displayed in the applicable final three right-hand columns when each applies. The first of the three are for DOJ's *de facto* standards (2500 for the post-merger HHI, and delta of 50), the second, the Attorney General's *de facto* standards (1800 HHI, delta 50), and, the third, our proposed in-the-wings (ITW) construction (1800 HHI, 5 firm concentration greater than 50%).

CONCENTRATION ANALYSIS OF REPUBLIC-ALLIED MERGER											
States	Metropolitan Statistical Area	5 Firm % TPD	Concentration Ratio						Summary		
			Tons per Day			Remaining Life			DOJ	AG	ITW
			Pre HHI	Post HHI	Delta	Pre HHI	Post HHI	Delta			
California	Bakersfield	35%	1263	1353	90	1238	1366	128	●	●	
	Fresno	64%	1552	1934	382	2003	2066	64	●	●	
	Los Angeles	39%	1287	1461	173	1489	1677	188	●	●	
	Modesto	65%	1436	2280	844	1766	2437	671	●	●	
	Riverside	45%	1251	1716	465	2195	3552	1356	●	●	
	Sacramento	58%	1432	2198	766	1871	2235	364	●	●	
	Salinas	70%	1582	2532	951	1699	2348	649	●	●	●
	San Diego	41%	1421	1621	199	1795	2030	236	●	●	
	San Francisco	63%	1548	2506	958	1812	2527	715	●	●	●
Stockton	63%	1516	2418	903	1825	2520	695	●	●		
Georgia	Atlanta	54%	1033	1378	345	1053	1242	189	●	●	
	Augusta	72%	1833	2660	827	1465	1925	460	●	●	
	Chattanooga	65%	1624	1877	253	1516	1568	52	●	●	
	Columbus	54%	1074	1716	642	1163	1593	430	●	●	
	Savannah	70%	3004	3004	0	2441	2441	0	●	●	●
Illinois	Bloomington	82%	6751	6751	0	5589	5589	0	●	●	●
	Champaign	87%	2980	4252	1272	3519	4851	1331	●	●	
	Chicago	87%	2042	2883	841	2322	3268	946	●	●	
	Davenport-Moline	76%	2713	2894	181	2576	2759	183	●	●	
	Decatur	82%	3864	4850	986	3669	4342	673	●	●	
	Ottawa	86%	2351	2662	310	2582	2744	162	●	●	
	Peoria	79%	4452	4452	0	4080	4080	0	●	●	●
	Rockford	90%	2328	2611	283	2509	2682	173	●	●	
	Springfield	81%	3135	3135	0	3146	3146	0	●	●	●
St. Louis	72%	1984	2395	411	1683	1991	308	●	●		
Indiana	Bloomington	58%	1619	2087	469	1847	2557	710	●	●	
	Chicago	87%	2110	2981	871	2389	3364	975	●	●	
	Elkhart	85%	2645	4357	1712	3198	4852	1654	●	●	
	Evansville	58%	1619	2087	469	1847	2557	710	●	●	
	Fort Wayne	77%	2203	3933	1730	2398	4482	2084	●	●	
	Indianapolis	69%	1809	2791	982	2074	3659	1585	●	●	
	Lafayette	85%	2693	4654	1961	3339	5175	1836	●	●	
	Louisville	57%	1681	1973	291	2175	2731	556	●	●	
	South Bend	90%	2462	3865	1403	2946	4308	1363	●	●	
Terre Haute	88%	3364	4511	1147	3920	4845	925	●	●		
Michigan	Ann Arbor	87%	2621	3689	1068	2182	3118	936	●	●	
	Detroit	86%	2679	3663	984	2230	3198	967	●	●	
	Flint	88%	2704	3703	999	2301	3118	817	●	●	
	Grand Rapids	88%	2517	3997	1480	2479	3931	1453	●	●	
	Holland	89%	2833	3260	427	2806	3282	476	●	●	
	Jackson	88%	2544	3861	1317	2293	3688	1395	●	●	
	Kalamazoo	93%	2491	3806	1315	2501	4081	1579	●	●	
	Lansing	86%	2518	3657	1139	2275	3216	940	●	●	
	Muskegon	90%	2823	3243	420	2633	3162	529	●	●	
Saginaw	89%	2800	3779	979	2444	3342	898	●	●		
N Carolina	Ashville	57%	1345	96	-1249	0	53	53	●	●	
	Charlotte	48%	1185	1424	239	565	730	165	●	●	
	Durham	58%	1499	1826	327	4325	4375	51	●	●	●
	Fayetteville	43%	1319	1506	187	628	739	110	●	●	
	Greensboro	50%	1957	2364	407	910	1221	311	●	●	
	Greenville	65%	2097	2394	297	5604	5639	35	●	●	●
	Hickory	52%	1348	1499	151	756	885	129	●	●	
	Raleigh	62%	1717	2047	329	4137	4204	67	●	●	
	Wilmington	27%	1448	1448	0	2538	2538	0	●	●	●
Winston-Salem	43%	874	1152	277	537	713	176	●	●		

Continued on next page...

continued from previous page

States	Metropolitan Statistical Area	5 Firm % TPD	Concentration Ratio						Summary		
			Tons per Day			Remaining Life			DOJ	AG	ITW
			Pre HHI	Post HHI	Delta	Pre HHI	Post HHI	Delta			
Ohio	Akron	79%	2643	3705	1062	2457	3615	1157	●	●	
	Canton	75%	2247	3177	929	2188	3003	815	●	●	
	Cincinnati	49%	1528	1807	278	1712	2043	331	●	●	
	Cleveland	82%	2338	3566	1227	1807	2798	991	●	●	
	Columbus	60%	1583	2466	883	3338	5669	2331	●	●	
	Dayton	49%	1358	1849	491	1428	1800	373	●	●	
	Mansfield	80%	2400	4181	1780	1878	3142	1264	●	●	
	Springfield	43%	1546	1931	385	1667	1919	252	●	●	
	Toledo	82%	2223	3518	1295	1965	3317	1352	●	●	
	Youngstown	83%	2129	2824	695	1968	2713	745	●	●	
Pennsylvania	Allentown	39%	1012	1094	82	1107	1157	50	●	●	
	East Stroudsburg	45%	1269	1376	107	1531	1612	81	●	●	
	Erie	77%	1988	2852	864	1831	2729	897	●	●	
	Harrisburg	44%	1248	1248	0	1215	1215	0	●	●	
	Lancaster	39%	1012	1094	82	1107	1157	50	●	●	
	Philadelphia	32%	769	815	46	802	829	27	●	●	
	Pittsburgh	73%	1758	2173	415	1806	2257	451	●	●	
	Reading	37%	925	989	64	970	1011	41	●	●	
	Scranton	39%	1179	1259	80	1917	1949	32	●	●	●
York	43%	1253	1318	65	1102	1138	36	●	●		
Texas	Austin	64%	2336	2336	0	2152	2152	0	●	●	●
	Beaumont	76%	2382	3006	624	1948	3143	1195	●	●	●
	Brownsville	69%	2656	2656	0	2836	2836	0	●	●	●
	Corpus Christi	69%	2656	2656	0	2836	2836	0	●	●	●
	Dallas	41%	1156	1254	98	1452	1560	108	●	●	
	El Paso	73%	4633	4633	0	7348	7348	0	●	●	●
	Houston	70%	2588	2588	0	2262	2262	0	●	●	●
	Killeen	45%	1437	1545	108	1780	1908	128	●	●	
	McAllen	34%	2468	2468	0	3636	3636	0	●	●	●
	San Antonio	71%	2784	2784	0	3092	3092	0	●	●	●
Wisconsin	Appleton	89%	3768	3808	41	2829	2878	49	●	●	●
	Duluth	92%	3264	3264	0	3989	3989	0	●	●	●
	Eau Claire	88%	2853	2853	0	3378	3378	0	●	●	●
	Green Bay	89%	4410	4410	0	3190	3190	0	●	●	●
	Janesville	90%	2361	2558	197	2247	2370	123	●	●	●
	La Crosse	81%	2932	2932	0	2968	2968	0	●	●	●
	Madison	88%	2439	2572	134	2238	2306	68	●	●	
	Milwaukee	88%	2219	2636	416	1838	2312	473	●	●	
	Oshkosh	90%	4028	4028	0	3190	3190	0	●	●	●
	Racine	88%	2161	2643	483	1847	2476	629	●	●	
Wausau	88%	2741	2741	0	2508	2508	0	●	●	●	

TABLE 3

Next, TABLE 4 culls from the list of all 78 markets that were analyzed, the 59 with post-merger HHI values above 1800 and also with differences between the pre- and post-merger HHI values that are greater than 50. It then lists them from those with the highest to the lowest HHIs, both on a tons per day, and on a remaining capacity basis.

In the vertically integrated waste industry, these high concentration levels for disposal will provide further avenues to market power that can be exploited by price squeezes.

When there are bottleneck functions in an industry that are controlled by dominant firms – here, landfills where every hauler’s garbage trucks must dump at day’s end – smaller companies without their own landfills become vulnerable. The integrated firms that tightly control those landfills can charge independent haulers more to dump than they internally bill themselves, pricing competition out of the market. Under the conditions in many markets today, the impact on competition of increases in consolidation through price squeezes will tend to be magnified by the merger for this reason.

Even though the waste industry is characterized as an oligopoly, in which a few large firms dominate in most local markets, to some extent, until now there have been constraints on its ability to price squeeze in many markets. This has been due to widespread excess capacity for disposal.

When there are more than two members in an oligopoly, and risks for direct collusion are high, pricing discipline, including price squeezing independent haulers, can be difficult to enforce in the face of that overcapacity.

Markets Adversely Affected by Merger					
Ordered from Highest to Lowest Post-Merger HHI					
By Tons per Day			By Remaining Capacity		
Decatur	IL	4850	Columbus	OH	5669
Lafayette	IN	4654	Lafayette	IN	5175
Terre Haute	IN	4511	Elkhart	IN	4852
Elkhart	IN	4357	Champaign	IL	4851
Champaign	IL	4252	Terre Haute	IN	4845
Mansfield	OH	4181	Fort Wayne	IN	4482
Grand Rapids	MI	3997	Durham	NC	4375
Fort Wayne	IN	3933	Decatur	IL	4342
South Bend	IN	3865	South Bend	IN	4308
Jackson	MI	3861	Raleigh	NC	4204
Kalamazoo	MI	3806	Kalamazoo	MI	4081
Saginaw	MI	3779	Grand Rapids	MI	3931
Akron	OH	3705	Jackson	MI	3688
Flint	MI	3703	Indianapolis	IN	3659
Ann Arbor	MI	3689	Akron	OH	3615
Detroit	MI	3663	Riverside	CA	3552
Lansing	MI	3657	Chicago	IN	3364
Cleveland	OH	3566	Saginaw	MI	3342
Toledo	OH	3518	Toledo	OH	3317
Holland	MI	3260	Holland	MI	3282
Muskegon	MI	3243	Chicago	IL	3268
Canton	OH	3177	Lansing	MI	3216
Beaumont	TX	3006	Detroit	MI	3198
Chicago	IN	2981	Muskegon	MI	3162
Davenport-Moline	IL	2894	Beaumont	TX	3143
Chicago	IL	2883	Mansfield	OH	3142
Erie	PA	2852	Ann Arbor	MI	3118
Youngstown	OH	2824	Flint	MI	3118
Indianapolis	IN	2791	Canton	OH	3003
Ottawa	IL	2662	Cleveland	OH	2798
Augusta	GA	2660	Davenport-Moline	IL	2759
Racine	WI	2643	Ottawa	IL	2744
Milwaukee	WI	2636	Louisville	IN	2731
Rockford	IL	2611	Erie	PA	2729
Madison	WI	2572	Youngstown	OH	2713
Janesville	WI	2558	Rockford	IL	2682
Salinas	CA	2532	Bloomington	IN	2557
San Francisco	CA	2506	Evansville	IN	2557
Columbus	OH	2466	San Francisco	CA	2527
Stockton	CA	2418	Stockton	CA	2520
St. Louis	IL	2395	Racine	WI	2476
Greenville	NC	2394	Modesto	CA	2437
Greensboro	NC	2364	Janesville	WI	2370
Modesto	CA	2280	Salinas	CA	2348
Sacramento	CA	2198	Milwaukee	WI	2312
Pittsburgh	PA	2173	Madison	WI	2306
Bloomington	IN	2087	Pittsburgh	PA	2257
Evansville	IN	2087	Sacramento	CA	2235
Raleigh	NC	2047	Fresno	CA	2066
Louisville	IN	1973	Cincinnati	OH	2043
Fresno	CA	1934	San Diego	CA	2030
Springfield	OH	1931	St. Louis	IL	1991
Chattanooga	GA	1877	Augusta	GA	1925
Dayton	OH	1849	Springfield	OH	1919
Durham	NC	1826	Killeen	TX	1908
Cincinnati	OH	1807	Dayton	OH	1800

TABLE 4

However, as the number of firms in the oligopoly declines, price followship and discipline will rise dramatically, competition from independent haulers can be regularly punished, and significant price increases will be imposed.<sup>21</sup>

Finally, one caveat should be repeated again about how much concentration will precisely increase in each affected market. This analysis was done based upon all landfills larger than 250 tons per day within a 100-mile contour line of the metropolitan area's boundary. That is not a site specific determination of which actual landfills are used by those providing commercial waste service in that area. In addition, raw HHI calculations can fail to fully identify those markets where future concentration effects will be significantly greater than indicated, such as Los Angeles. For the reasons noted previously (*see page 7*), in general this will tend to produce a conservative result. But, that is not necessarily the case in every market. The results are meant to be presumptive, but not conclusive, in the event rebuttal is demonstrated.

In conclusion, the results of the HHI analysis show that, subject to any site specific rebuttal, more than four-fifths of the analyzed markets, 78 in all, can presumptively be expected to see significant increases in market power and higher prices in the future if the merger is consummated.

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<sup>21</sup> Douglas Greer, *Industrial Organization and Public Policy* 3<sup>rd</sup> Ed. (MacMillan Publishing, 1992), at pp. 346-351.

## ✻ Analysis of Non-HHI Factors .

In addition to the HHI concentration data, as discussed previously, the DOJ and NAAG Guidelines also lay out further factors potentially relevant here to consider in evaluating the possibility of increased market power, including: (i) ease of entry,<sup>22</sup> (ii) efficiencies,<sup>23</sup> and (iii) history of collusive conduct in this industry.<sup>24</sup>

### (i) Ease of entry

If a merger will significantly increase competition, but there are few significant barriers to entry, then any above-market price increases imposed by the combined firm will tend to be transient as new entrants erode the market power that the merger initially created.

However, in the case of the waste industry, the barriers to entry are nearly insurmountable. As noted, the Subtitle D rules, which EPA promulgated in the early 1990s, shuttered thousands of independent open dumps, imposed costly minimum engineering standards and created a lengthy licensing process for new sites.

Permitting a new site became a precarious proposition that only very few large and entrenched players could afford due to the costs, skills and staying power necessary to secure approval of a new facility, and the significant risk that the permit might be denied even after incurring those major up front costs. Aggravating these risks was the growing public awareness of the real or perceived environmental threats from landfills. That has led many local groups to form in order to actively intervene in the proceedings to oppose the permits and to become politically involved.

The chief reliable means to add disposal capacity and manage risks was now to seek authority to expand previously permitted sites. The contentious siting issues were off the table and many of the vocal opponents, having lost before, had moved elsewhere. This provided a wedge for the perspicacious national waste firms to exploit, which many did.

In the early 1990s, Subtitle D had closed down thousands of open dumps and Superfund imposed substantial liabilities for potentially responsible parties when those sites were detected to have contaminated groundwater supplies.<sup>25</sup> Private owners could usually declare bankruptcy to shed those liabilities.

But, many of the shuttered dumps were owned by municipalities, who could not walk away from long term liabilities, and therefore had become very concerned about those looming budget breaking costs. Companies like Waste Management and BFI were able to acquire attractively located dumps from those cities by offering to assume their liabilities. In return, the national waste corporations were effectively given a permitted near-in site that could, as a practical matter, be expanded on top of or adjoining the closed facility.

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<sup>22</sup> DOJ Guidelines ¶3.

<sup>23</sup> DOJ Guidelines ¶4.

<sup>24</sup> NAAG Guidelines ¶5.2. There is also a final factor to permit mergers that otherwise might be disallowed or circumscribed in the case of a failing firm, DOJ Guidelines ¶5, but that is not relevant here.

<sup>25</sup> Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9610.

Where that was not possible, the major firms had the resources to find regional sites much farther out where low densities made public opposition less likely. Equally vital, they insured that there was a concomitant stream of trash to amortize such sizable investments through their control over large waste volumes.<sup>26</sup>

The only palpable exception lies in those markets where either the municipality or a well-funded privately held local company had previously permitted their own landfills. These disposal sites that were not controlled by the oligopoly served as pressure relief valves to new entry.

Taken together, there are near insurmountable barriers to entry in those disposal markets where the major vertically integrated firms presently dominate, and there are no significant independent landfills similarly situated to serve as a deterrent against price squeezes by the major firms.

### (ii) Efficiencies

The DOJ Guidelines, but generally not the NAAG Guidelines, offer the possibility for offsetting efficiency gains from the merger that will result in lower prices to consumers in order to minimize the anti-competitive impacts from the merger.

U.S. merger reviews are conducted similar to a criminal prosecution in which all of the filings are confidential while the matter is considered (afterwards, there are limited disclosures). Consequently, there is no publicly available documentation of the merging firms' claimed efficiencies other than vague news accounts and analyst reports, quoting from the companies' spokesmen.

While a careful analysis is not possible, some comment is. Published analysts reports suggested that the merging firms claimed as an efficiency gain the fact that they would no longer drive by landfills owned by the other of the two companies on the way to dump at their own. This is the national firms "internalization" policy intended to fill their own sites first even at the expense of efficiency. However, the DOJ Guidelines state that "the Agency will reject claims of efficiencies if equivalent of comparable savings can reasonably be achieved by the parties through other means."<sup>27</sup> There is no reason why they could not end internalization now without a merger to do that.

Other accounts point to the greater route densities that the merger will produce as the source of efficiency gains. However, our published analysis shows that, within a local market, due to a host of confounding factors, the combined market share needs to exceed 75% before the cost savings will rise above 10%. Seventy-five percent shares would equate to an HHI of more than 5600, too high to be approved.<sup>28</sup>

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<sup>26</sup> There were a few efforts by well capitalized companies from outside the waste industry to do something similar using abandoned mine sites to construct merchant landfills. This occurred in the Los Angeles region at Mesquite and Eagle Mountain landfills, and might have maintained competition in those areas. But, without their own collection routes, they found themselves unable to insure sufficient loads to open their gates, and, in the end, had to capitulate and sell out to the LA Sanitation District.

<sup>27</sup> DOJ Guidelines, at ¶4.

<sup>28</sup> Peter Anderson, "Mergers in the Waste Industry: How Greater Route Densities Impact Collection Efficiency," *MSW Management* (Sept/Oct 1999).

The only efficiency claim with an associated dollar value is the savings in general administration and sales expenses of \$100 million to \$150 million annually argued for both mergers. Although there is not sufficient information to evaluate the reasonableness of these claims, even if true, they do not appear to rise to a sufficient level to offset the projected harms.

HHI values above the level of concern are intended to be reflective of a sustained price increase of 5% or more, according to the DOJ Guidelines.<sup>29</sup> With 2007 revenues for AWI, RSG and WM being \$6.1 billion, \$3.2 billion and \$13.3 billion, the Republic merger would result in a combined company with approximately \$9.3 billion in revenues. Five percent of the Republic's annual revenues would be at least \$465 million, which the Guidelines indicate is the least expected increase in consumer prices. This is at least \$315 million to \$365 million more in higher prices than the alleged gain in efficiency.

For this industry, past history would suggest that they would raise prices far more upon acquiring market power. In 1999, the just merged USA Waste-Waste Management went on to acquire Eastern Environmental. Immediately after DOJ sanctioned the USA-Waste/WM deal, the new Waste Management was reported to have imposed "eye-popping spot market price hikes" in the northeast, where Eastern had been dominant, averaging 89% on an unweighted basis.<sup>30</sup> Thus, even if there were significant efficiency gains, there is anecdotal historical data to suggest that very significant price increases would be imposed on the consumer. Cost savings are not likely, based upon this example, to be flowed through.

### (iii) History of collusion

Small companies, large corporations and mob-controlled operations in the waste industry have had an extensive and very long history of price fixing, bribery, questionable political influence and fraud, for which judgments and settlement orders have been entered in federal, state and private party administrative proceedings and judicial actions.<sup>31</sup>

At the same time, even as the pace of charges, settlements and convictions has slowed, the largest firms have relentlessly proceeded to consolidate the industry eventually to the point that market power and monopoly pricing becomes inevitable. The major firms have moved past the slow buy outs of small privately held companies (1970-1992), to acquisitions of regional publicly traded corporations (1992-1996) and mergers with other national entities (1998-2008), as well as asset swaps and volume exchanges among the top three companies (1997-2004).

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<sup>29</sup> DOJ Guidelines, at ¶1.11.

<sup>30</sup> Bob Brown, "WMI Raises Tip Fees," *Waste News* (Mar 1, 1999).

<sup>31</sup> For a sampling of examples, see, e.g., Harold Crooks, *Giants of Garbage: the Rise of the Global Waste Industry and the Politics of Pollution Control* (James Lorimer & Co., Toronto 1993); Rick Cowan, *Takedown: the Fall of the Last Mafia Empire* (Putnam & Sons, New York, 2002); U.S. v. Reuter Recycling and Waste Management (D.C.D.C. Case No. 95-CV-01982), Final Judgment filed October 20, 1995; *Cumberland Farms v. BFI* (Case 87-3717) Plaintiff's Memorandum In Opposition to Defendant's Motion For Summary Judgement; *Securities and Exchange Commission v. Dean Buntrock* (ND IL Case No. 02-C-2180), Complaint filed March 26, 2002; *Waste Management v. Louis D. Paolino* (D.C. Delaware Case No. 99-930), Amended Complaint filed January 19, 2000; San Diego District Attorney, Final Report: Waste Management, Inc., (1992); *State v. Waste Management* 82 Wis. 2d 555 (1975).

The impact of all this has seen the top three's control over landfill capacity increases from 35% in 1994 to 68% in 2004.<sup>32</sup> This second wave of mega-mergers clearly suggests a continuing determination to increase market concentration until market power can be exercised across the country.

For years, the leading firms in the industry have exhorted each other through public statements, and indirectly via analysts' reports, to accept pricing discipline, but without substantial effect. However, in the past year, just as the second wave of mega-mergers impends, consolidation seems to have finally created market power in the waste industry, according to the *Wall Street Journal*:

“The country's three largest garbage haulers have been steadily raising prices despite the slowing economy. And with a major buyout among them looming, prices are likely to continue their climb.

“The increases are a break from the recent past, and follow a strategy shift in the wake of the industry's 1990s consolidation. They also followed some blunt, public suggestions about pricing by the companies' top executives. ...

“Another big merger among the waste giants could spur ever higher contract prices, say industry observers. The big three trash companies already control about two-thirds of the landfill business.”<sup>33</sup>

Analysts report the same trend:

“The largest waste companies continued to demonstrate pricing discipline throughout July as WMI proposed rate hikes of 24-68% in some contracts while successfully implementing fuel surcharges of as much as 16%, which suggests minimal customer resistance to recovery fees. AW raised prices by as much as 23% and also introduced fuel recovery provisions. RSG and WCN [Waste Connections] increased prices across a handful of agreements, although some small independent haulers have become more aggressive in line with past economic slowdowns. These haulers have proposed rates that are as much as 20% below other bidders in some cases, although our field checks do not suggest that this trend is weighing on the trajectory of pricing across the industry.”<sup>34</sup>

Similar reports come from companies that track disposal pricing indicating that the major companies are sustaining higher prices even in the face of volume declines, something that would be unlikely to happen in competitive markets without pricing discipline:

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<sup>32</sup> Raymond James, *Landfill Pricing Power* (2003). Waste Business Journal, Landfill Data Bases.

<sup>33</sup> Ilan Brat, “Garbage Haulers Hoist Prices: Truce Allows Waste Management, Allied and Republic to Push Higher,” *Wall Street Journal* (Sept 18, 2008).

<sup>34</sup> Merrill Lynch, *Pollution Control - Monthly Pickup* (Aug 5, 2008), at p. 1.

“Recent surveys of waste disposal and processing facilities indicates continued pricing strength in the industry despite a small decline in waste volumes. Prices nationally are up nearly 4% among all facility types including landfills, transfer and processing facilities and waste-to-energy plants. Landfill pricing is up by 6.2% in the last twelve months even though volumes are off by 3%.<sup>35</sup>”

The waste industry’s history of collusion and recent evidence of coordinated price increases demonstrates a need for decisive action if competition is not to be significantly diminished further by the merger.

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Waste Business Journal, *Weekly News Bulletin* (Oct 14, 2008).

## ✻ Appropriate Remedy .

The statutory purpose of merger reviews is to determine whether the proposed merger “may substantially lessen competition.”<sup>36</sup> The DOJ Guidelines add that their “unifying theme ... is that mergers should not be permitted to create or enhance market power or to facilitate its exercise. Market power to a seller is the ability profitably to maintain prices above competitive levels for a significant period of time.”<sup>37</sup> The remedies should conform to these strictures.

Seventy-eight local markets have HHI values more than 1800, which the Guidelines indicates is “highly concentrated,” of which 46 have HHI values above 2500 that DOJ is reported to rely upon. The seventy-eight markets average an HHI of 3107, which is almost twice that needed to be highly concentrated. Also, fourteen markets have HHI values greater than 4,000, four more than 5000, one over 6000 (Bloomington, IL) and one beyond 7000 (El Paso, TX).

According to the Guidelines, such high concentration numbers are presumed to create market power for a seller to sustain prices above free market levels. All this is further aggravated by the industry’s history of seeking and exploiting market power, as well as the most recent evidence of its new found capacity to sustain above-market pricing.

In practice, most waste mergers in the past have not been opposed by anti-trust regulators. Merging firms were only required to spin off some overlapping assets, largely transfer stations or landfills and sometimes commercial routes, in the expectation that would offset the threat to competition from greater consolidation. However, there are four very serious infirmities with the realism of this approach that make it wholly inapposite today –

- ***Sales to oligopoly.*** Except for a limited number of markets where there are large independent haulers, most divested assets are too expensive to be acquired by small firms – the ones most likely to use those assets to increase competition – and therefore wind up in the hands of other oligopoly members. If that were not enough, the merging firms are often permitted to sell all or most of their divested assets as a single package, which are only affordable to other national or regional oligopoly members. For that reason, the assets eventually wind up in the hands of other members of the oligopoly, or recently minted companies, midwived by private equity firms as conduits, to later pass the assets back to the oligopoly.<sup>38</sup> Historically, the 1998-1999 mergers reduced the number of leading firms from four to two, with a relatively new firm, Republic, which was largely staffed by former WMI executives, essentially structured to scoop up the divested assets from the first wave of WMI’s mergers. Now, having grown in the process to a top shelf number 3 firm, Republic is seeking to reduce today’s three firm oligopoly back to two again. The end result of asset divestitures is not a sustainable offsetting increase in competition, but rather a reversion to oligopoly.

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<sup>36</sup> 15 U.S.C. §1, 2, 19 and 20.

<sup>37</sup> DOJ Guidelines, at ¶0.1.

<sup>38</sup> *Waste Management v. Louis D. Paolino* (D.C. Delaware Case No. 99-930), Amended Complaint filed January 19, 2000, on line at <http://competitivewaste.org/reports/CCWWasteCourt.PDF>. This document should be reviewed for the documentation of the extent to which the waste industry has successfully engaged in subterfuge to deceive anti-trust regulators as to their true intentions.

- ***Non-strategic assets divested.*** Many prior divestitures were accepted from lists provided by the merging firms, and were widely seen to be sales of non-strategic assets, caustically referred to in the industry as “dogs.” A telling example in the USA Waste-WMI and WMI-Eastern Environment mergers was the divestiture of a permit for a transfer station<sup>39</sup> that, reportedly, had no chance of being approved.
- ***Overlap markets ignored.*** Here DOJ is reported to be considering some remedies in eight markets, while this analysis found 78 markets will be affected. Presumably because of limited resources, only the largest markets with overlapping assets that showed high post merger HHI values are being designated for remedial attention. But if, as an example, only half of the affected markets are targeted for remedies, then successive waves of mergers and asset swaps eventually will wind up with a market concentrated to a far greater degree than had been contemplated when each was considered in artificial isolation from the others to come.
- ***Conduct remedies fall fallow.*** Also because of limited resources by antitrust regulators, key conduct remedies, such as curtailments of abusive evergreen contracts by dominant firms, are no longer being pursued, reportedly because the merging companies have threatened litigation.<sup>40</sup>

The Justice Department’s final settlement with the four major merging firms in 1998 and 1999 based on asset divestitures may well have been reached with the best of intentions under the circumstances. But, the final results on the ground have been a complete failure.

The supreme irony is that, during the 1998-99 period, a critical dispute was whether the number two firm, Allied/BFI, should be eligible to purchase the assets ordered divested from the Waste Management and Eastern Environmental merger. Strong concerns were raised by the public that Allied/BFI would cooperatively set monopoly prices and not compete with WMI. The Department of Justice agreed that other oligopoly members such as BFI and Allied should be disqualified. But, in their place, Republic – considered by DOJ to be an independent player – was set up like a white knight to acquire WMI’s divested assets.<sup>41</sup>

Yet, Republic is now before the Justice Department as a full member of today’s three firm oligopoly and positioned to roll it up into a two firm oligopoly. If it seeks to use an asset divestiture remedy again, the critical question that DOJ must answer is this:

*How will divesting a limited number of largely non-strategic assets to companies such as BFI Canada, Veolia or Waste Connections not repeat the earlier failed divestiture effort when assets had been sold to Republic.*

Current remedies in DOJ’s quiver at most only postpone monopolization, but in no way protect competition from the threats posed by this merger, along with those that inevitably will follow if this one is condoned.

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<sup>39</sup> *U.S. v. Waste Management*, (DC EDNY, Case No. 98 CV 7168), Competitive Impact Statement filed Feb 2, 1999, at NOTE 4.

<sup>40</sup> See. e.g., *U.S. v. Waste Management* (DC DC Case No.03CV01409), Final Judgment, filed June 27, 2003.

<sup>41</sup> *U.S. v. Waste Management*, (DC EDNY, Case No. 98 CV 7168), United States's Certificate of Compliance with Provisions of the Antitrust Procedures and Penalties Act, filed May 21, 1999, at ¶D.

Some of these objections have been raised in the past, only to be brushed aside by the Justice Department, asserting that it cannot look out for possible consequences past the next two years following a settlement order.<sup>42</sup> That is the nub of the problem. The history of the industry demonstrates that it is relentlessly pursuing its long term objectives over many decades, while DOJ confines its purview to a near-term two year event horizon. This is compounded by the fact that the putative remedies are half-hearted in their impacts in the short term, and vanish – think Republic – over the long term. The end result of regulation being so hopelessly mismatched is self-apparent.

Since only the imposition of *non-transitory* price increases *lasting for the foreseeable future* are sufficient to warrant government intervention in a merger,<sup>43</sup> it necessarily follows in turn that only sustainable remedies can properly be considered adequate to permit an otherwise dangerous consolidation to proceed. The obsolete divestiture remedy, being ephemeral in regard to the waste industry, fails the intent of DOJ's own guidelines.

With a long history of collusive and fraudulent conduct, with critical landfill concentration by the top three firms exceeding 68%, with pricing discipline now taking hold, with the traditional remedies that DOJ relies upon proven ineffective, the better response is to oppose the merger.

If that is not done, a new approach is essential that consists of (i) structural remedies that actually prevent the increased concentration of landfills from creating insurmountable barriers to new entry in more markets. Also a return to (ii) conduct remedies that would be needed to unlock functional control that the oligopoly often maintains over commercial hauling by abusive practices.

But, *arguendo*, in the event the failed asset divestitures remedy is nonetheless used, in no case ought any sales be permitted to other members of the oligopoly, such as Waste Management and Waste Connections.<sup>44</sup> Neither can they be allowed, as it was in the 1998 USA Waste-Waste Management-Eastern Environmental merger, to firms likely to later become members of the oligopoly or seem to be conduits, such as BFI Canada.<sup>45</sup> Also, divestitures should be packaged by local market, with the option to bid for single assets, and not regionally or nationally, because that, *per se*, makes it impossible for independent actors to bid. In markets with large independent haulers, this may provide substantive relief from the anti-competitive effects of greater consolidation.

Thus, disaggregated sales should be confined to the few privately-held firms such as, but not limited to, Norcal, Rumpke and Texas Disposal with the size to afford such purchases, along with any other smaller independent haulers that are able to secure financing to close.

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<sup>42</sup> *U.S. v. Waste Management*, (DC EDNY, Case No. 98 CV 7168), United States's Certificate of Compliance with Provisions of the Antitrust Procedures and Penalties Act, filed May 21, 1999, at ¶A.

<sup>43</sup> DOJ Guidelines, at ¶1.11

<sup>44</sup> *U.S. v. Waste Management*, (DC EDNY, Case No. 98 CV 7168), United States's Certificate of Compliance with Provisions of the Antitrust Procedures and Penalties Act, filed May 21, 1999, at ¶D.

<sup>45</sup> *Waste Management v. Louis D. Paolino* (D.C. Delaware Case No. 99-930), Amended Complaint filed January 19, 2000.

(i) Structural remedies

The independent haulers that can usually be relied upon to maintain competition, being small and poorly capitalized, are not capable of purchasing expensive divested assets. An innovative alternative is needed to overcome the oligopoly's lock hold on landfills, which creates bottlenecks that impede new entry.

Our proposal is to give independent haulers, without their own disposal facilities, the right to long term contracts for airspace in the merged companies' landfills at the same price that the local subsidiary is billed by its parent. To prevent the combined company from harassing the contracting independents with "white glove" inspections or long queues at the scale house, careful provisions would need to be added to discourage abusive behavior. Disputes can be resolved through outside arbitration to minimize administrative burdens on state attorneys general.

In some markets where simultaneous entry into recycling and waste services are required to comply with local policies, there may be a second type of bottleneck for facilities to process recyclables, called "material recovery facilities" (MRF). When recyclables are collected in a single stream, which require more capital intensive equipment, most markets will not be able to support two single stream MRFs. In these cases, independent haulers should also be given the right for long term contracts.

There is precedent for the airspace remedy in prior Federal Energy Regulatory Commission reviews of natural gas pipeline cases.<sup>46</sup> An outline of the terms for the airspace remedy is detailed in the SIDEBAR.

LONG TERM AIR SPACE CONTRACT

1. Eligible Buyers. Any municipal solid waste or construction and demolition debris service provider, whether publicly traded or privately held, which serves the local market in the year in which the HSR notification was filed, and does not in that year have its own landfill assets, is eligible to purchase airspace.
2. Maximum Volume. Eligible buyers may contract for a maximum volume of airspace at any landfill owned by the merged company and previously used by it to serve the market, in amount up to 150% of the tons the buyer collected from its customers, in the year in which it disposed of the greatest quantity during the prior five years, multiplied by 15 years. The eligible buyer may dispose of up to one-tenth of the maximum volume of waste in any year during the length of the contract, but is not required to dispose of any minimum quantity. Volume shall be converted into weight based upon the density of waste in the landfill in the year the HSR notification is filed.
3. Price. The price for disposal in that airspace under the contract may not exceed that which had been internally booked by the parent firm that owned the landfill prior to the merger and charged to its district unit, adjusted annually for inflation by the producer price index.
4. Length of Contract. The contract shall be for not less than 15 years.
5. Purchase Period. Each state Attorney General in the states with local markets affected by this provision shall timely notify eligible buyers about the opportunity for them to purchase airspace rights. Eligible buyers have 6 months from entry of the settlement or court order to request in writing from the merged company, with copies to the Department of Justice and state Attorney General, for a contract for airspace as provided here. If the eligible buyer has a contract for airspace at a landfill that is closed prior to the end of the 15 year period, the merged company shall permit the buyer to contractually substitute airspace at another of the merged company's landfills in the market of its choosing.
6. Non-Discrimination. (a) Inspections. If the seller of landfill airspace conducts inspections of incoming loads to its landfills at which airspace has been contracted for the purpose of rejecting certain loads, it must do so on a nondiscriminatory basis as between its trucks and those with airspace contracts. The seller must also maintain publicly available documentation to show that loads selected for inspection, and the type and severity of violations used to justify rejecting loads, are done on a non-discriminatory basis, including an accurate video record of all inspections and a tabulation of the number of truck loads dumping at the landfill by waste firm and the number of loads rejected, along with the reasons why. (b) Queues. Gate queues shall be non-discriminatory. If an airspace buyer claims that its trucks are kept on a longer queue than the seller's, the seller will visually record the queue and make tapes publicly available. (c) Arbitration. The buyer may take claims of discriminatory treatment to arbitration. If the seller loses the arbitration, he or she must pay the costs of arbitration, including the buyer's legal fees. A record of all complaints and arbitrations will be filed with the state Attorney General.
7. Succession or Sale. Landfill airspace contracts shall transfer to successor companies. Holders of landfill airspace contracts may sell their contract to another firm, if that other firm does not own landfill assets.
8. Dispute Resolution. If either the merged company or eligible buyer has any other dispute with the other that is not finally resolved under ¶16, DOJ will delegate the arbitration resolution process to the applicable state Attorney General, who may either, after hearing from both sides, issue a final decision, or submit the issue on behalf of the parties for final resolution to arbitration.

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61 FERC ¶61272 (1992), affm *United Distribution Cos. v. FERC*, 88 F.3rd 1105 (DCDC. 1996).

(ii) Conduct remedies

Another tactic deployed by the major firms has been evergreen contracts, which raise conduct barriers to entry in addition to the structural barriers from control over landfills.

Evergreen contracts are prevalent in the commercial sector, in which customers are given two, three or even five year terms with automatic renewal clauses. If the customer does not request in writing to cancel service within the contract's final 30-90 days, it is automatically renewed. Most customers are unaware of this clause in their contracts – assuming that they know there is a contract – and therefore rarely cancel in that narrow window of time to shop for a better offer. Evergreen contracts therefore make it significantly more difficult for independent haulers to capture business from the major firms even when they offer better prices and/or service.

These contracts also prolong the time for new entrants to gain a beach head large enough to reach minimum economies of scale and in sufficiently close proximity to achieve economic route densities. This significantly increases the working capital requirements to attempt new entry, and the risks of unsuccessful entry.

In the past, DOJ saw evergreen contracts by dominant firms as illegal conduct intended to impede new entry in the early 1990s, and had been aggressive in curtailing the abusive provisions.<sup>47</sup> However, in later merger reviews, such as in 1998 and 1999, restrictions on abusive evergreen contracts were absent from the final settlements.<sup>48</sup> Reportedly, DOJ no longer insisted upon ending evergreen abuses because, having agreed to the reform once, the merging companies were unwilling to again voluntarily relinquish such an effective tactic for suppressing competition.

However, if remedies that work are discarded from Justice's tool kit, and only demonstrably useless ones are retained, the entire Hart-Scott-Rodino process deteriorates into a mockery of the statute.

Clearly, now that the solid waste industry is so close to reaching its endgame, the necessary resources need to be devoted to the process so DOJ can insist again on this essential remedy as a precondition for any settlement in lieu of litigation. With all of the resources that Republic and Allied have already committed to closing this deal, it is exceedingly difficult to believe that they would risk it all at this late date over this issue.

Specifically, contracts by the merging firms should be modified to:

- **Term.** Permit the customer to cancel the contract without penalty after one year in the case of non-compacting container service, and after two years for compacting container service.
- **Renewal.** Cancel any provisions that automatically renew a contract without the customer's express written agreement.

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<sup>47</sup> See, e.g., *U.S. v. Browning Ferris Industries* (DC DC Case No. 96-CV-00297), Final Judgment filed May 14, 1996.

<sup>48</sup> *U.S. v. Waste Management* (DC EDNY Case No. 98 CV 1768) Final Judgement filed May 25, 1999.

- **Liquidated damages.** In the case where liquidated damages would apply, they may not exceed charges for the last three months.
- **Escalators.** Bar the collection of escalator charges when the specific basis of the calculation is not based upon an independent third party's index, clearly stated in the contract, and shown in the bill as a separate line. Any escalator must also operate reciprocally when the index declines as when it increases.

## ✻ Conclusion .

The vertically integrated national waste companies have long been embarked on a strategic business plan to control landfills in the major local markets in order to erect insurmountable barriers to entry.

To that end, they have gone through a process of first rolling up most small independent haulers, then combining many of the regional companies, and finally through mega-mergers doing the same thing among the top three firms. Today, after nearly four decades of consolidation, the resulting oligopoly stands at the precipice of sustainable pricing power.

As this analysis of HHI value in the major affected markets demonstrates, the two-firm oligopoly that this merger envisions will make it impossible to sustain competitive conditions in the waste industry in the future. Also, followship among a smaller number of dominant firms will increase. That can be expected to make price squeezes to impede new entry more likely, even when overcapacity exists.

The track record of the remedies used in earlier merger reviews demonstrates conclusively that they have been completely ineffective. Too few of the affected markets had too few strategic assets divested to other members of the oligopoly.

Regulators should either oppose the merger of Republic and Allied, or impose innovative structural airspace alternatives that have the potential to cure the demonstrable and fatal flaws in asset divestitures, and also the proven conduct remedies barring abusive evergreen contracts. □

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The Center for a Competitive Waste Industry supports efforts to restore and maintain competition in the solid waste industry of especial interest for public works directors, independent haulers, businesses using solid waste services, anti-trust regulators and recyclers. The Center conducts research on the impact of concentration on prices charged for waste services and on the ability of the public to expand recycling. It also investigates possible collusive conduct and helps coordinate the efforts of those interested in protecting competitive markets for waste services.

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