



# APPENDIX D

## REGULATION 6, RULE 2 COMMERCIAL COOKING EQUIPMENT

OCTOBER 2007

Prepared for  
Bay Area Air Quality Management District

Prepared by  
**Applied Development Economics**  
100 Pringle Avenue, Suite 560 • Walnut Creek, California 94596 • (925) 934-8712  
2151 River Plaza Drive, Suite 150 • Sacramento, CA 95833 • (916) 923-1562  
[www.adeusa.com](http://www.adeusa.com)

# TABLE OF CONTENTS

1. Introduction and Summary.....	1
2. Description of Proposed Rule.....	3
3. Impact of Proposed New Rules: Regulation 6, Rule 2: Commercial Cooking Equipment ..	5
Appendix A: Estimating Number of Restaurants By Type .....	25
Appendix B: Economic Profile of Food Services Industries .....	26
Appendix C: Amount of Beef Prepared By Select National Chains .....	27
Appendix D: Aggregate Annual Amount of Prepared Beef.....	28
Appendix E: Revenue-Adjusted After-Tax Net Profit Trends .....	29
Appendix F: After-Tax Net Profit Trends .....	30
Appendix G: After-Tax Net Profit Trends: Select Restaurants .....	31

# 1. INTRODUCTION AND SUMMARY

---

The Bay Area Air Quality Management District (“District”) is proposing Regulation 6, Rule 2 to directly regulate emissions from restaurants. In proposing this regulation, the District focuses its efforts on reducing emissions from two types of restaurant equipment generally known as “charbroilers,” which produce over 80 percent of commercial cooking emissions. Proposed Regulation 6, Rule 2 would regulate “chain-driven charbroilers” and “under-fired charbroilers.”

As part of the rule-making process, the District investigated a variety of control options for addressing charbroiler emissions. The District reviewed reports conducted by universities, other air districts, and city-based health departments. As a result of its investigation, the District crafted Regulation 6, Rule 2 to require restaurants with chain-driven charbroilers to install what are called “catalytic oxidizers” to limit emissions of both PM and VOC or to install a certified alternative control, if restaurants purchase at least 500 pounds of beef per week and cook at least 400 lbs of beef per week on the charbroiler. Owners of restaurants with one or more under-fired charbroilers with a total grill surface area of at least 10 square feet that, at the same time, purchase at least 1,000 pounds of beef per week and cook at least 800 pounds of beef per week on the charbroiler will be required to install a control certified to reduce PM emissions. The District anticipates these proposed standards will result in 85 percent reduction in PM emitted by affected charbroilers and an 86 percent reduction in VOC emitted by chain-driven charbroilers.

## SUMMARY

The report below shows that there are 13,348 restaurants in the nine-county Bay Area. At 6,228 and 6,484 respectively, the number of “full-service restaurants” and “limited-service eating places” (i.e. fast food restaurants) are roughly equal, with the balance of the eating establishment organized under the “special food services” group, which comprises of cafeterias and venues that prepare and distribute food on special occasions, such as

football stadiums.<sup>1</sup> At 10,192 out of 13,348, the bulk of restaurants in the Bay Area employ less than 20 people. Based on our analysis, particularly with respect to amount of prepared and cooked beef by businesses within various workforce size categories, the report shows that proposed new rule Regulation 6, Rule 2 does not affect restaurants employing less than 20 people, i.e. the bulk of restaurants in the nine-county Bay Area.

The proposed rule will impact fast food establishments and full service establishments, particularly steakhouses. The proposal has different thresholds for applicability based on the type of equipment in use in the restaurant. Chain-driven charbroilers predominately are found in fast food restaurants and under-fired charbroilers are found predominately in full service restaurants, including steakhouses. The analysis concludes that businesses affected by the proposal are *not* significantly impacted by the rule. Moreover, small businesses are *not* disproportionately impacted by the proposed new rule.

---

<sup>1</sup> Bay Area county health department permits estimate the number of licensed food service establishments at 14,838. 13,348 restaurants, and further categorizations of restaurants by type of food service, are from Dun and Bradstreet.

## 2. DESCRIPTION OF PROPOSED RULE

---

Broilers are the central appliance for most restaurant kitchens and are used to cook steak, hamburgers, fish, chicken, and seafood, as well as to brown food and reheat plated food. All broilers are comprised of a grated grill and a heat source, where food resting on the grated grill cooks as the food receives heat either directly from the heat source, or indirectly by way of a radiant surface.

Proposed Regulation 6, Rule 2 would regulate two types of charbroilers: chain-driven and under-fired. A chain-driven (conveyorized) charbroiler is a semi-enclosed broiler designed to move food mechanically on a grated grill through the device as the food cooks. Food cooks quickly because chain-driven charbroilers have burners located both above and below the grill. Chain-driven charbroilers are most common in fast food restaurants.

In an under-fired charbroiler, the heat source is positioned at or below the level of the grated grill. Designs of under-fired charbroilers vary widely. Some under-fired broilers use charcoal or wood for fuel, but usually, the broilers are fueled by gas or electricity. In gas under-fired charbroilers, a radiant surface, such as a bed of ceramic briquettes or a metal shield, placed above the burners diffuses heat from the burners. The heating elements of electric charbroilers are often interwoven with, or sheathed inside, the grill. Under-fired charbroilers are common in fine dining and casual restaurants.

To estimate the number of charbroilers used in Bay Area restaurants, the District consulted a 1997 SCAQMD report called “Staff Recommendations Regarding Controlling Emissions from Restaurant Operations,” which reports findings from a survey of the type of equipment used in restaurant cooking operations in Southern California. According to that report, 33 percent of restaurants operate under-fired charbroilers and 3.7 percent operate chain-driven broilers. The District verified these percentages by conducting its own independent survey of Bay Area restaurants, which also determined under-fired charbroiler grill sizes. Based on these percentages, the District estimates that approximately 4,897 Bay Area restaurants operate under-fired charbroilers and 554 operate chain-driven charbroilers. Of the 4,897 under-fired charbroilers, the District estimates that about

489, or 10 percent, have a grill size of ten square feet or greater. With regard to the amount of cooked beef, the District used several studies to estimate the amount of meat cooked on restaurant charbroilers and the associated emissions. The District presents estimates on the amount of meat cooked per year on an individual charbroiler in the Bay Area in its staff report of November 2007. It is estimated that 443 of the 554 chain-driven charbroilers will be subject to the proposed standards in Regulation 6, Rule 2 based on the amount of beef cooked and approximately 200 of the 489 under-fired charbroilers with large grills will be subject to the standards based on the amount of beef cooked.

## 3. IMPACT OF PROPOSED NEW REGULATION 6, RULE 2: COMMERCIAL COOKING EQUIPMENT

---

This section of the socioeconomic analysis describes demographic and economic trends in the San Francisco Bay Area (Bay Area) region. Following an overview of the methodology for the socioeconomic analysis, the first part of this section compares the Bay Area against California and does so to provide a context for understanding demographic and economic changes that have occurred within the Bay Area between 1995 and 2005. For the purposes of this report, the Bay Area region is defined as Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties.

### METHODOLOGY

The socioeconomic analysis of the proposed new rule concerning commercial cooking involves the use of information provided directly by BAAQMD, as well as secondary data used to describe the industries affected by the proposed rule amendments. Based on information provided by BAAQMD staff, ADE determined that the impacts would affect businesses in a narrow set of industries, particularly those in food preparation industries of NAICS 7221 (full-service restaurants), NAICS 7222 (limited-service eating places), and NAICS 7223 (special food services).<sup>2</sup> With this information ADE prepared an economic descriptions of affected industries and businesses, as well as to analyze data on the number of jobs, sales levels, the typical profit ratios and other economic indicators for the Bay Area businesses. Data for particular types of restaurants that will be affected by the proposed rule more so than others was not readily available from the California Economic Development Department (EDD-LMID), the US Economic Census or US Bureau of Labor Statistics' County Business Patterns. Thus, to determine the number of beef-oriented restaurants such as steakhouses and hamburger restaurants, ADE combined data from EDD-LMID and the County Business Patterns with data from Dun and Bradstreet (see Appendix A).

---

<sup>2</sup> NAICS = North American Industrial Classification System

In addition to estimating the number of establishments by specific restaurant types and their respective employment figures, ADE estimated revenues, net profits and profit ratios using data from the US Economic Census and other sources such as US IRS and corporate annual reports. The result of the socioeconomic analysis shows what proportion of profit the compliance costs represent. Based on a given threshold of significance, ADE discusses in the report whether the affected establishments and industries are likely to reduce jobs as a means of recouping the cost of compliance. To the extent that such job losses appear likely and significant, the indirect multiplier effects of the job losses area estimated using a regional IMPLAN input-output model.

It is worth noting that this approach and the District staff approach to estimate that number of restaurants affected by the rule compare favorably considering the differences in approach.

## REGIONAL DEMOGRAPHIC TRENDS

The Bay Area experienced moderate population growth from 1996 to 2006. Between 1996 and 2001, the nine-county region increased by nearly 1.4 percent annually, from 6.4 million in 1996 to almost 6.9 million in 2001. From 2001 to 2006, the population again shifted, this time from 6.9 million to 7.1 million for an increase of approximately 1.1 percent per year. California grew at a faster rate between 1996 and 2001 and 2001 and 2006, growing by 1.5 percent per year and 1.6 percent per year respectively. Within the Bay Area, the greatest percentage increase occurred in Contra Costa County. From 1996 to 2006 Contra Costa increased its population by 1.6 percent per year – the only area to grow at an annual faster than California’s growth rate over the same period. Table 1 shows the population changes that occurred in the Bay Area and California from 1996 to 2006.

[This space is blank]



**TABLE 1**  
**Population Trends: Nine-County San Francisco Bay Area Region, 1996 - 2006**

	Population			Percent Annual Change		
	1996	2001	2006	96-01	01-06	96-06
<b>California</b>	<b>31,962,949</b>	<b>34,441,561</b>	<b>37,195,240</b>	<b>1.5%</b>	<b>1.6%</b>	<b>1.5%</b>
Bay Area	6,406,763	6,872,313	7,135,505	1.4%	0.8%	1.1%
Alameda County	1,345,787	1,465,753	1,509,981	1.7%	0.6%	1.2%
Contra Costa County	883,351	966,845	1,030,732	1.8%	1.3%	1.6%
Marin County	237,880	248,994	253,818	0.9%	0.4%	0.7%
Napa County	118,209	126,093	134,326	1.3%	1.3%	1.3%
San Francisco County	744,072	784,031	800,099	1.1%	0.4%	0.7%
San Mateo County	679,929	712,527	726,336	0.9%	0.4%	0.7%
Santa Clara County	1,599,332	1,701,665	1,780,449	1.2%	0.9%	1.1%
Solano County	368,534	401,662	421,542	1.7%	1.0%	1.4%
Sonoma County	429,669	464,743	478,222	1.6%	0.6%	1.1%

Source: Applied Development Economics, based on household population estimates from The California Department of Finance

## REGIONAL ECONOMIC TRENDS

The Bay Area is one of the world's greatest regional economies. It benefits from pre-eminent knowledge-based industries, with competitive strength flowing from an unmatched culture of entrepreneurship, world-leading research institutions, and some of the nation's best educated and most highly skilled workforce. With these remarkable advantages, it has led through innovation in a wide range of research and industrial fields. As a sign of its strength and dynamism, if the nine-county San Francisco Bay Area region was its own country, its economy would rank in the top 15 of the world.

Table 2 below identifies some general trends in the Bay Area's economy between 1996 and 2006. As of 2006, the professional and business services sector was the largest employer in the region, at 554,576 jobs or 17 percent of all private and public sector jobs.<sup>3</sup> This is a slight change from 1996 when professional and business services accounted for 16.5 percent of all Bay Area jobs. Between 1996 and 2006, professional and business services increased a slight 0.8 percent per year, a rate slower than growth

---

<sup>3</sup> Table 2 shows "Trade, Transportation and Utilities" as employing 561,357 workers in 2006, or 17 percent of all workers in the Bay Area. We do not identify this broad sector as the "largest employer" in the Bay Area because "Trade, Transportation and Utilities" contains a widely varied set of industries, from retail, to transportation-warehousing, utilities, and wholesale.

exhibited by Information, Financial Activities, Educational and Health, and Leisure and Hospitality. As Table 2 shows, these sectors grew annually by 1.5 percent, 1.0 percent, 2.4 percent, and 1.6 percent respectively between 1996 and 2006. However, it is worth noting that both Financial Activities and Professional-Business Services exhibited reductions in workforce in the last five years between 2001 and 2006, as Table 2 shows. Another important part of the regional economy is the public sector, which altogether employs 442,048 workers, or 13.5 percent of all workers in the nine-county Bay Area. Yet, employment in these segments of the economy declined for the most part between 1996 and 2001 and 2001 and 2006. Table 2 shows Bay Area industry sectors and their trends from 1996 to 2006.

**TABLE 2**  
**Economic Profile of the Nine-County San Francisco Bay Area Region, 1996-2006**

Industry	----- Employment Trends -----			Regional Employment Distribution, 2006	-- Annual Percent Change --		
	1996	2001	2006		96-01	01-06	96-06
Total Private-Public Sectors	3,077,910	3,180,139	3,275,433	100.00%	0.7%	0.6%	0.6%
Private Sector:							
Goods-Producing	612,552	682,136	567,697		2.2%	-3.6%	-0.8%
Natural Resources and Mining	26,861	29,517	22,760	0.69%	1.9%	-5.1%	-1.6%
Construction	128,937	192,338	192,897	5.89%	8.3%	0.1%	4.1%
Manufacturing	456,754	460,281	352,040	10.75%	0.2%	-5.2%	-2.6%
Service-Providing	2,041,790	2,358,456	2,265,688		2.9%	-0.8%	1.0%
Trade, Transportation, and Utilities	563,672	608,241	561,357	17.14%	1.5%	-1.6%	0.0%
Information	96,876	147,581	112,820	3.44%	8.8%	-5.2%	1.5%
Financial Activities	194,069	208,854	213,378	6.51%	1.5%	0.4%	1.0%
Professional and Business Services	509,591	619,989	554,576	16.93%	4.0%	-2.2%	0.8%
Education and Health Services	285,917	337,874	360,678	11.01%	3.4%	1.3%	2.4%
Leisure and Hospitality	273,778	304,944	320,772	9.79%	2.2%	1.0%	1.6%
Other Services	117,887	130,973	142,107	4.34%	2.1%	1.6%	1.9%
Government Ownership:							
Federal Government	83,162	57,652	53,001	1.62%	-7.1%	-1.7%	-4.4%
State Government	108,771	81,895	87,874	2.68%	-5.5%	1.4%	-2.1%
Local Government	231,635	298,251	301,173	9.19%	5.2%	0.2%	2.7%

Source: Applied Development Economics from data supplied by the Labor Market Information Division of the California Employment Development Department

## DESCRIPTION OF AFFECTED INDUSTRIES

As Table 3 below indicates, there are 13,348 restaurants in the nine-county Bay Area. At 6,228 and 6,484 respectively, the number of “full-service restaurants” and “limited-service eating places” (i.e. fast food restaurants) are roughly equal, with the balance of the eating establishment organized under the “special food services” group. Table 3 also identifies the number of eating-places among various types of restaurant establishments that could be affected by the proposed new rule compared to other types of eating establishments, such as full-service “steakhouses” (146 establishments) or fast-food hamburger operations (667 establishments).<sup>4</sup>

---

<sup>4</sup>The number of fast-food hamburger restaurants and or full-service steakhouses is largely a function of the proportion of these restaurants in the Dun and Bradstreet dataset (see Appendix A). These proportions were applied against the gross number “full-service restaurants,” “limited-service eating places” or “special food services,” as reported by the EDD LMID. Based on the DnB proportions, the consultant initially estimated 241 fast-food hamburger establishments. At 241, the number of hamburger fast-foods amounts to 1.8 percent of all restaurants. In its corporate annual report, McDonalds indicates that this corporation alone represents 2.5 percent of all restaurants in the US. In addition, McDonald’s is 42 percent of the fast-food hamburger market in the United States. With these two metrics, we can adjust the number of fast-food hamburger restaurants in the nine-county Bay Area from 241 to 667. As it is, a cursory review of readily-available sources such as Yahoo® Yellow Pages for fast-food restaurants shows that there are 205 Burger King® and Carls’ Jr. ® restaurants in the region. Combining these restaurants with the number of McDonalds in the nine-county region suggests that the 667 estimate is reasonable.

**TABLE 3**  
**Economic Profile of Food Serving Industries Potentially Subject to Rule, 2006**

NAICS	Industry Descriptions	Total Establishments	Total Employment	Number of Establishments By Employment Size						
				1-19	20-49	50-99	100-249	250-499	500-999	1000 or more
7221	Full-Service Restaurants	6,228	114,215	4,624	1,030	440	132	2	0	0
	<i>Steakhouse restaurants</i>	146	2,672	108	24	10	3	0	0	0
	<i>Other beef full-service rest.</i>	3,294	60,407	2,446	545	233	70	1	0	0
	<i>Others primarily poultry- fish</i>	209	3,829	155	35	15	4	0	0	0
	<i>All others</i>	2,580	47,306	1,915	427	182	55	1	0	0
7222	Limited-Service Eating Places	6,484	90,853	5,030	1,308	131	12	2	1	0
	<i>Fastfood hamburger estab</i>	667	3,374	518	135	13	1	0	0	0
	<i>Other fastfood establishments</i>	615	14,592	477	124	12	2	0	0	0
	<i>All other limited service</i>	5,202	72,887	4,035	1,050	105	9	2	1	0
7223	Special Food Services	636	11,994	538	62	18	14	1	3	1
		13,348	217,062	10,192	2,400	589	158	5	4	1

Source: Applied Development Economics, based on US BLS County Business Patterns (distribution of establishments by size), California EDD (number of establishments) and Dun and Bradstreet (establishments by type of restaurants [see Appendix A for detail]). Also: see Appendix B for estimated number of workers by employment size categories.

Table 3 also distributes the establishments by size in terms of number of workers per establishment. This information is important because it allows us to estimate the amount of beef that is prepared by restaurants using a pounds of beef per worker average we reached via a variety of other sources (see Appendix C). As Table 3 shows, at 10,192 out of 13,348, the bulk of restaurants employ less than 20 people.<sup>5</sup> Proposed new rule Regulation 6, Rule 2 does not affect any of these small-sized restaurants, as we show later in this report.

Table 4 below identifies the amount of beef prepared on a weekly basis by the average restaurant in a variety of size categories. The table also identifies in which categories the average restaurant produces an amount of beef that exceeds either the 500- or the 1000-pound thresholds employed in Regulation 6, Rule 2 (see numbers in bold print in Table 4). For example, the average full-service steakhouse that employs between 20 and 49 people purchases and cooks 711 pounds of beef per week (or almost 100 pounds of beef per day). The average steakhouse that employs between 50 and 99 workers purchases and cooks an estimated 1,527 pounds of beef per week. Likewise, the average “other full-service restaurant” that employs between 100 and 249 people and prepares fish, poultry and other main courses along with beef purchases, on average, 1,430 pounds of beef per week. As Table 4 shows, the average fast-food hamburger operation that employs 20 to 49 workers prepares 779 pounds of beef per week, while the hamburger operation employing between 50 and 99 workers prepares 1,672 pounds per week. Based on this analysis of the average restaurants within a certain size in terms of employment, in all likelihood fast-food hamburger restaurants with at least 20 – 49 employees will be subject to provisions of Regulation 6, Rule 2, whereas full-service steakhouse restaurants will not be subject to the rule unless they employ at least 50 – 99 people.<sup>6</sup>

---

<sup>5</sup> It is worth noting that typical fast-food eating establishments such as McDonalds and Burger King employ between 25 and 50 workers on average.

<sup>6</sup> Based on limited data obtained from the District’s survey of area restaurants, District staff estimate that the average amount of beef cooked per week in a Burger King restaurant is 555 pounds and the average for a Carl’s Jr. restaurant is 767 pounds. Staff also calculated the weekly pounds of beef cooked from a high-volume Carls Jr. and found that they cook an estimated average of 1094 pounds per week. These two restaurant chains both use chain-driven charbroilers to cook hamburgers (for more information, see Appendix C).

**TABLE 4**  
**Average Weekly Amount of Beef Prepared By Restaurants By Size of Workforce, 2006**

---- Average Weekly Pounds of Beef Prepared By Typical Establishment By Size ----										
NAICS	Industry Descriptions	Total Establishments	Total Employment	1-19	20-49	50-99	100-249	250-499	500-999	1000 or more
7221	Full-Service Restaurants	6,228	114,215	61	210	451	1,055	1,917	0	0
	<i>Steakhouse restaurants</i>	146	2,672	206	711	<b>1,527</b>	<b>3,576</b>	0	0	0
	<i>Other beef full-service rest.</i>	3,294	60,407	82	284	611	<b>1,430</b>	<b>3,080</b>	0	0
	<i>Others primarily poultry- fish</i>	209	3,829	52	178	382	894	0	0	0
	<i>All others</i>	2,580	47,306	26	89	191	447	754	0	0
7222	Limited-Service Eating Places	6,484	90,853	124	429	922	2,160	3,372	6,748	12,655
	<i>Fastfood hamburger estab</i>	667	3,374	226	<b>779</b>	<b>1,672</b>	<b>4,965</b>	0	0	0
	<i>Other fastfood establishments</i>	615	14,592	113	389	<b>836</b>	<b>1,142</b>	0	0	0
	<i>All other limited service</i>	5,202	72,887	113	389	<b>836</b>	<b>2,148</b>	<b>3,192</b>	<b>6,388</b>	0
7223	Special Food Services	636	11,994	127	436	938	2,196	3,028	5,400	12,655
		13,348	217,062	202	1,076	2,310	5,411	8,316	12,148	12,655

Source: Applied Development Economics, based on US BLS County Business Patterns (distribution of establishments by size), California EDD (number of establishments) and Dun and Bradstreet (establishments by type of restaurants [see Appendix A for detail]). Also: see Appendix B for estimated number of workers by employment size categories.

## ANNUAL COST OF COMPLIANCE: REGULATION 6, RULE 2: COMMERCIAL COOKING EQUIPMENT

Table 5 identifies the various equipment impacted sources can utilize to control their respective emissions. In addition, the table identifies the total annual cost for each equipment. District staff believes that, in all likelihood, impacted sources with “chain-driven charbroilers” will employ a “catalytic oxidizer” to meet the requirements of the proposed new rule. Restaurants with “under-fire charbroilers” will choose either “HEPA filters” or “electrostatic precipitators.” The annual costs of these solutions are compared against estimated revenues and net profits for purposes of analyzing the socioeconomic impacts of Regulation 6, Rule 2.

**TABLE 5**  
**Annual Compliance Cost: Proposed Regulation**  
**6, Rule 2: Commercial Cooking Equipment**

<b>Chain-driven Charbroiler</b>	<b>Tot. Annual Cost</b>
Catalytic Oxidizer	<b>\$2,028</b>
Wet Scrubber	\$5,838
Electrostatic Precipitators	\$6,734
Fiber Bed Filters	\$11,405
Thermal Incinerator	\$100,111
<b>Under-Fired Charbroilers</b>	
HEPA Filters	<b>\$8,254</b>
Electrostatic Precipitators	<b>\$8,799</b>
Wet Scrubber	\$11,796
Thermal Incinerator	\$100,111

Source: Bay Area Air Quality Management District

It is worth noting that the District reports that 33 percent and almost four percent of all restaurants in the Bay Area employ either “under-fired charbroilers” or “chain-driven broilers,” respectively. However, for purposes of analyzing impacts, this report analyzes only the estimated number of restaurants that will purchase at least 500 pounds of beef per week and cook at least 400 pounds of beef a week on a chain-driven charbroiler, and those with a charbroiler grill surface area that is at least 10 square feet that purchase at least 1000 pounds of beef per week and cook at least 800 pounds per week on an under-fired charbroiler. In addition, this report assumes that chain-driven charbroilers are used in fast food restaurants, subject to the proposed rule at 500

pounds of beef purchased, and that under-fired charbroilers are used in full service restaurants, subject to the proposed rule at 1000 pounds of beef purchased. For example, Table 4 above indicates that, on average, the typical full-service steakhouse restaurant employing between 50 and 99 workers prepares 1,527 pounds of beef per week. Table 3 indicates that there are 10 full-service steakhouse restaurants in the Bay Area employing between 50 and 99 workers. Thus, the analysis assumes that all 10 restaurants will comply with the provisions of Regulation 6, Rule 2 in one of two ways, namely by utilizing either a HEPA filter or an electrostatic precipitator.

Tables 6 and 7 below report findings with respect to revenues and net profits. For the most part, revenues are based on gross and per-worker figures culled from the 2002 Economic Census for the Bay Area, which was then adjusted for inflation. Steakhouse restaurant revenues are based on revenues calculated using data in Appendix C. Revenue and net profit estimates are included only for categories whose respective average purchases exceeds the 500- and 1000-pound thresholds (as indicated in Table 4). Net profits are based on ratios found in Appendix E.<sup>7</sup>

---

<sup>7</sup>The US IRS issues financial data and ratios including net profits for businesses in certain revenue categories. As a result, analysts are able to distinguish after tax net-profit rates for low-revenue producing businesses from middle- to above-average revenue producing businesses. In issuing its revenue-adjusted data, the US IRS combines “restaurants” with “accommodations,” which includes hotels, motels and other lodgings. For the five-year period between 1999 and 2004, “restaurants and accommodations” after-tax net profit rate was 2.15 percent. Using another US IRS data set that does not adjust for revenue, we arrive at a 3.96 percent net profit rate for “restaurants” between 1999-2004, leading us to conclude that accommodations is dragging down the revenue-adjusted “restaurants and accommodations” net profit rate. We correct for this downward influence in Appendices E and F, and, where appropriate, apply these restaurant-only revenue-adjusted profit rates against Table 6 to obtain Table 7 net profits.



**Table 6**  
**Estimated Aggregate Revenue of Industries Subject to Proposed Regulation 6, Rule 2: Commercial Cooking Equipment**

NAICS	Industry Descriptions	Establishments	Estimate of the Number of Establishments Subject to Rule Based on Amount of Beef Purchased and Cooked	Revenue Ranges						
				1-19	20-49	50-99	100-249	250-499	500-999	1000 or more
7221	Full-Service	6,228	114			\$23,136,061	\$589,091,373	\$17,689,603		
	Steakhouse	146	37	--- na ---	--- na ---	\$23,136,061	\$16,233,994	--- na ---	--- na ---	--- na ---
	Other beef rest.	3,294	71	--- na ---	--- na ---	--- na ---	\$572,857,378	\$17,689,603	--- na ---	--- na ---
	Oth poultry- fish	209	4	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	All others	2,580	1	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
7222	Limited-Service	6,484	277		\$234,948,852	\$489,260,712	\$107,955,250	\$28,595,500	\$28,614,589	
	Hamburger	667	149	--- na ---	\$234,948,852	\$50,389,982	\$11,118,536	--- na ---	--- na ---	--- na ---
	Other fastfood	615	14	--- na ---	--- na ---	\$46,360,271	\$10,229,382	--- na ---	--- na ---	--- na ---
	All others	5,202	114	--- na ---	--- na ---	\$392,510,459	\$86,607,332	\$28,595,500	\$28,614,589	--- na ---
7223	Special Food Svs	636		--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
		13,348	391		\$234,948,852	\$512,396,772	\$697,046,623	\$46,285,103	\$28,614,589	

**Table 7**  
**Estimated Aggregate After-Tax Net Profits of Industries Subject to Proposed Regulation 6, Rule 2: Commercial Cooking Equipment**

NAICS	Industry Descriptions	Establishments	Number of Establishments Potentially Subject to Rule	Revenue Ranges						
				1-19	20-49	50-99	100-249	250-499	500-999	1000 or more
7221	Full-Service Restaurants	6,228	114		\$1,193,040	\$1,094,820	\$29,271,307	\$606,048		
	<i>Steakhouse restaurants</i>	146	37	--- na ---	\$1,193,040	\$1,094,820	\$806,649	--- na ---	--- na ---	--- na ---
	<i>Other beef-serving full-service restaurants</i>	3,294	71	--- na ---	--- na ---	--- na ---	\$28,464,657	\$606,048	--- na ---	--- na ---
	<i>Others that primarily serve poultry or fish</i>	209	4	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>All others</i>	2,580	1	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
7222	Limited-Service Eating Places	6,484	277		\$15,306,482	\$29,491,507	\$5,192,633	\$979,685	\$980,339	
	<i>Fastfood hamburger establishments</i>	667	149	--- na ---	\$15,306,482	\$1,726,366	\$380,922	--- na ---	--- na ---	--- na ---
	<i>Other fastfood establishments</i>	615	14	--- na ---	--- na ---	\$2,193,812	\$508,287	--- na ---	--- na ---	--- na ---
	<i>All other limited service</i>	5,202	114	--- na ---	--- na ---	\$25,571,329	\$4,303,424	\$979,685	\$980,339	--- na ---
7223	Special Food Services	636	0	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
		13,348	391		\$16,499,522	\$30,586,327	\$34,463,939	\$1,585,733	\$980,339	

Source: Applied Development Economics, based on US BLS County Business Patterns (distribution of establishments by size), California EDD (number of establishments), Dun and Bradstreet (establishments by type of restaurants), US Economic Census 2002 (revenue estimates) and US IRS (1999-2004 net profit rates for "food and accommodations" adjusted by revenue amounts [see Appendices E and F]).

The tables below present aggregate costs for those fast food restaurants that are in categories for which the average restaurant purchases more than 500 pounds of beef per week, and for those full service restaurants that are in categories for which the average restaurant purchases more than 1000 pounds of beef per week. The fast food restaurants will employ a chain-driven charbroiler. As an example, the “fast food hamburger” restaurants that employ between 20 and 49 purchase, on average, 779 pounds of beef per week. These 135 restaurants will annually bear costs of \$273,780 to comply with the rule using a catalytic oxidizer. In total, the other limited-service restaurants that employ at least 50 people that would be expected to be subject to the rule and use a catalytic oxidizer to comply with the rule will annually bear costs of \$294,060.

There are 10 steakhouses that employ 50 to 99 workers that, on average, purchase 1,597 pounds of beef per week. These restaurants will annually bear costs of \$82,540 if using a “HEPA filter” and \$87,990 if using an “electrostatic precipitator.” Large restaurants in the “other beef-serving full-service restaurants” category employing between 100 and 249 workers will annually bear \$577,780 in “HEPA filter” costs (see Table 9), or \$615,930 in “electrostatic precipitator” costs, depending on which emissions-control solution is right for these 70 businesses. Restaurants in the “All others” category among full-service restaurants may or may not have to comply with the rule, depending on the size of charbroiler and the amount of beef cooked. Based on this analysis, if all “Steakhouse restaurants,” “Other beef-serving full-service restaurants” and “Special food services” establishments that employ at least 100 people were subject to the rule based on a large under-fired charbroiler and amount of beef cooked, these 92 establishments in total would bear annual costs of \$759,368 to comply using a “HEPA filter” and \$809,508 to comply using an “electrostatic precipitator.”

**Table 8**  
**Estimated Aggregate Annual Costs of Industries Subject to Proposed Regulation 6, Rule 2: Commercial Cooking Equipment: Catalytic Oxidizer**

NAICS	Industry Descriptions	Establishments	Est. Nos. of Establishments Subject to Rule Based on Beef Cooked	1000 or more						
				1-19	20-49	50-99	100-249	250-499	500-999	1000 or more
7221	Full-Service Restaurants	6,228	114							
	<i>Steakhouse restaurants</i>	146	37	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>Other beef-serving full-service restaurants</i>	3,294	71	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>Others that primarily serve poultry or fish</i>	209	4	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>All others</i>	2,580	1	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
7222	Limited-Service Eating Places	6,484	277		\$273,780	\$264,949	\$24,336	\$4,056	\$2,028	
	<i>Fastfood hamburger establishments</i>	667	149	--- na ---	\$273,780	\$27,288	\$2,028	--- na ---	--- na ---	--- na ---
	<i>Other fastfood establishments</i>	615	14	--- na ---	--- na ---	\$25,105	\$4,056	--- na ---	--- na ---	--- na ---
	<i>All other limited service</i>	5,202	114	--- na ---	--- na ---	\$212,556	\$18,252	\$4,056	\$2,028	--- na ---
7223	Special Food Services	636	0	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
		13,348	391		\$273,780	\$264,949	\$24,336	\$4,056	\$2,028	\$0

Source: Applied Development Economics, based on US BLS County Business Patterns (distribution of establishments by size), California EDD (number of establishments), Dun and Bradstreet (establishments by type of restaurants), US Economic Census 2002 (revenue estimates) and US IRS (1999-2004 net profit rates for "food and accommodations" adjusted by revenue amounts [see Appendices E and F]).

**Table 9**  
**Estimated Aggregate Annual Costs of Industries Subject to Proposed Regulation 6, Rule 2: Commercial Cooking Equipment: HEPA Filters**

NAICS	Industry Descriptions	Establishments	Est. Nos. of Establishments Subject to Rule Based on Beef Cooked	1000 or more						
				1-19	20-49	50-99	100-249	250-499	500-999	1000 or more
7221	Full-Service Restaurants	6,228	114			\$82,254	\$601,021	\$8,254		
	<i>Steakhouse restaurants</i>	146	37	--- na ---	--- na ---	\$82,254	\$25,463	--- na ---	--- na ---	--- na ---
	<i>Other beef-serving full-service restaurants</i>	3,294	71	--- na ---	--- na ---	--- na ---	\$575,558	\$8,254	--- na ---	--- na ---
	<i>Others that primarily serve poultry or fish</i>	209	4	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>All others</i>	2,580	1	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
7222	Limited-Service Eating Places	6,484	277							
	<i>Fastfood hamburger establishments</i>	667	149	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>Other fastfood establishments</i>	615	14	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>All other limited service</i>	5,202	114	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
7223	Special Food Services	636	0	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
		13,348	391			\$82,254	\$601,021	\$8,254		

Source: Applied Development Economics, based on US BLS County Business Patterns (distribution of establishments by size), California EDD (number of establishments), Dun and Bradstreet (establishments by type of restaurants), US Economic Census 2002 (revenue estimates) and US IRS.

Table 10

## Estimated Aggregate Annual Costs of Industries Subject to Proposed Regulation 6, Rule 2: Commercial Cooking Equipment: Electrostatic Precipitators

NAICS	Industry Descriptions	Establishments	Est. Nos. of Establishments Subject to Rule Based on Beef Cooked								1000 or more
				1-19	20-49	50-99	100-249	250-499	500-999		
7221	Full-Service Restaurants	6,228	114			\$87,990	\$640,706	\$8,799			
	<i>Steakhouse restaurants</i>	146	37	--- na ---	--- na ---	\$87,990	\$27,144	--- na ---	--- na ---	--- na ---	
	<i>Other beef-serving full-service restaurants</i>	3,294	71	--- na ---	--- na ---	--- na ---	\$613,562	\$8,799	--- na ---	--- na ---	
	<i>Others that primarily serve poultry or fish</i>	209	4	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
	<i>All others</i>	2,580	1	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
7222	Limited-Service Eating Places	6,484	277								
	<i>Fastfood hamburger establishments</i>	667	149	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
	<i>Other fastfood establishments</i>	615	14	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
	<i>All other limited service</i>	5,202	114	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
7223	Special Food Services	636	0	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
		13,348	391			\$87,990	\$640,706	\$8,799			

Source: Applied Development Economics, based on US BLS County Business Patterns (distribution of establishments by size), California EDD (number of establishments), Dun and Bradstreet (establishments by type of restaurants), US Economic Census 2002 (revenue estimates) and US IRS (1999-2004 net profit rates for "food and accommodations" adjusted by revenue amounts [see Appendices E and F]).

Tables 11 through 13 below express costs identified in the previous three tables as a percent of net profits. For most industries and business that are expected to bear costs, annual costs as a percent of net profits are below the ten-percent threshold used to determine if costs are significant. As Table 11 shows, annual cost of the “catalytic oxidizer” never exceeds the ten-percent threshold for all affected businesses in the various employment size categories. Tables 12 and 13 show that the annual cost of the “HEPA filter” and the “electrostatic precipitator” will also not exceed the ten-percent threshold for affected business in the various employment size categories.<sup>8</sup>

---

<sup>8</sup> It is important to note that “catalytic oxidizer,” “HEPA filter” and the “electrostatic precipitator” costs are mutually exclusive, as impacted sources will choose the emission-control solution that is appropriate for their operations. As a result, annual costs and cost-to-net profit ratios expressed in Tables 8 through 10 and Tables 11 through 13 respectively are *not* cumulative.

**TABLE 11**  
**Socioeconomic Impact Analysis: Annual Cost to Net Profit Ratio: Industries Subject to Proposed Regulation 6, Rule 2:**  
**Commercial Cooking Equipment: Catalytic Oxidizer**

NAICS	Industry Descriptions	Establishments	Est. Nos. of								1000 or more
			Establishments Subject to Rule Based on Beef Cooked	1-19	20-49	50-99	100-249	250-499	500-999		
7221	Full-Service Restaurants	6,228	114								
	<i>Steakhouse restaurants</i>	146	37	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>Other beef-serving full-service restaurants</i>	3,294	71	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>Others that primarily serve poultry or fish</i>	209	4	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
	<i>All others</i>	2,580	1	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---
7222	Limited-Service Eating Places	6,484	277		1.79%	0.90%	0.47%	0.41%	0.21%		
	<i>Fastfood hamburger establishments</i>	667	149	--- na ---	1.79%	1.58%	0.53%	--- na ---	--- na ---	--- na ---	
	<i>Other fastfood establishments</i>	615	14	--- na ---	--- na ---	1.14%	0.80%	--- na ---	--- na ---	--- na ---	
	<i>All other limited service</i>	5,202	114	--- na ---	--- na ---	0.83%	0.42%	0.41%	0.21%	--- na ---	
7223	Special Food Services	636	0	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
		13,348	391		1.79%	0.90%	0.47%	0.41%	0.21%		

Source: Applied Development Economics, based on US BLS County Business Patterns (distribution of establishments by size), California EDD (number of establishments), Dun and Bradstreet (establishments by type of restaurants), US Economic Census 2002 (revenue estimates) and US IRS (1999-2004 net profit rates for "food and accommodations" adjusted by revenue amounts).

**TABLE 12**  
**Socioeconomic Impact Analysis: Annual Cost to Net Profit Ratio: Industries Subject to Proposed Regulation 6, Rule 2:**  
**Commercial Cooking Equipment: HEPA Filters**

NAICS	Industry Descriptions	Establishments	Est. Nos. of								1000 or more
			Establishments Subject to Rule Based on Beef Cooked	1-19	20-49	50-99	100-249	250-499	500-999		
7221	Full-Service Restaurants	6,228	114				7.51%	2.05%	1.36%		
	<i>Steakhouse restaurants</i>	146	37	--- na ---	--- na ---	7.51%	3.16%	--- na ---	--- na ---	--- na ---	
	<i>Other beef-serving full-service restaurants</i>	3,294	71	--- na ---	--- na ---	--- na ---	2.02%	1.36%	--- na ---	--- na ---	
	<i>Others that primarily serve poultry or fish</i>	209	4	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
	<i>All others</i>	2,580	1	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
7222	Limited-Service Eating Places	6,484	277								
	<i>Fastfood hamburger establishments</i>	667	149	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
	<i>Other fastfood establishments</i>	615	14	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
	<i>All other limited service</i>	5,202	114	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
7223	Special Food Services	636	0	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	--- na ---	
		13,348	391				7.51%	2.05%	1.36%		

Source: Applied Development Economics, based on US BLS County Business Patterns (distribution of establishments by size), California EDD (number of establishments), Dun and Bradstreet (establishments by type of restaurants), US Economic Census 2002 (revenue estimates) and US IRS.

**Table 13**  
**Socioeconomic Impact Analysis: Annual Cost to Net Profit Ratio: Industries Subject to Proposed Regulation 6, Rule 2:**  
**Commercial Cooking Equipment: Electrostatic Precipitators**

NAICS	Industry Descriptions	Establishments	Est. Nos. of	Subject to						
			Beef Cooked	1-19	20-49	50-99	100-249	250-499	500-999	1000 or more
7221	Full-Service Restaurants	6,228	114				8.04%	2.19%	1.45%	
	<i>Steakhouse restaurants</i>	146	37	--- na ---	--- na ---		8.04%	3.37%	--- na ---	--- na ---
	<i>Other beef-serving full-service restaurants</i>	3,294	71	--- na ---	--- na ---			2.16%	1.45%	--- na ---
	<i>Others that primarily serve poultry or fish</i>	209	4	--- na ---	--- na ---			--- na ---	--- na ---	--- na ---
	<i>All others</i>	2,580	1	--- na ---	--- na ---			--- na ---	--- na ---	--- na ---
7222	Limited-Service Eating Places	6,484	277							
	<i>Fastfood hamburger establishments</i>	667	149	--- na ---	--- na ---			--- na ---	--- na ---	--- na ---
	<i>Other fastfood establishments</i>	615	14	--- na ---	--- na ---			--- na ---	--- na ---	--- na ---
	<i>All other limited service</i>	5,202	114	--- na ---	--- na ---			--- na ---	--- na ---	--- na ---
7223	Special Food Services	636	0	--- na ---	--- na ---			--- na ---	--- na ---	--- na ---
		13,348	391				8.04%	2.19%	1.45%	

Source: Applied Development Economics, based on US BLS County Business Patterns (distribution of establishments by size), California EDD (number of establishments), Dun and Bradstreet (establishments by type of restaurants), US Economic Census 2002 (revenue estimates) and US IRS (1999-2004 net profit rates for "food and accommodations" adjusted by revenue amounts).



## SMALL BUSINESS DISPROPORTIONATE IMPACT ANALYSIS

### DEFINITION OF SMALL BUSINESS PER CALIFORNIA STATUTE

For purposes of qualifying small businesses for bid preferences on state contracts and other benefits, the State of California defines small businesses in the following manner:

- Must be independently owned and operated;
- Cannot be dominant in its field of operation;
- Must have its principal office located in California
- Must have its owners (or officers in the case of a corporation) domiciled in California; and,
- Together with its affiliates, be either:
  - A business with 100 or fewer employees, and an average gross receipts of \$10 million or less over the previous tax years, or
  - A manufacturer with 100 or fewer employees

### SMALL BUSINESS IMPACT ANALYSIS

The proposed rule is expected to impact some small businesses that are in the category of limited-service restaurants. The compliance costs of the rule will not significantly impact these restaurants. The full-service restaurants that will likely be impacted are not likely to meet the definition of a small business because, as this analysis shows, they will employ more than 100 people. As a result, Regulation 6, Rule 2 does not disproportionately impact small businesses, because small businesses are likely not subject to the rule, or because businesses can bear either the incremental or total annual cost of compliance without any meaningful affects on level of service.

## APPENDIX A: ESTIMATING NUMBER OF RESTAURANTS BY TYPE

TABLE A  
Estimating Number of Restaurants By Restaurant Types, 2006

NAICS Industry Descriptions	(1) Calif EDD LMID, 2006	(2) Dun and Bradstreet	(3) Est. Nos. Restaurants Based on DD LMID and DnB	(4) Hamburger Fastfood adjustment based on McDonald 2.5 Percent and 42 Percent Metrics
7221 Full-Service Restaurants	6,228		6,228	6,228
<i>Steakhouse restaurants</i>		1.09%	146	146
<i>Other beef-serving full-service restaurants</i>		24.68%	3,294	3,294
<i>Others that primarily serve poultry or fish</i>		1.56%	209	209
<i>All others</i>			2,580	2,580
7222 Limited-Service Eating Places	6,484		6,484	6,484
<i>Fastfood hamburger establishments</i>		1.80%	241	667
<i>Other fastfood establishments</i>		7.80%	1,041	615
<i>All other limited service</i>			5,202	5,202
7223 Special Food Services	636		636	636
	13,348	15,022	13,348	13,348

Source: Applied Development Economics, based on California EDD LMID, Dun and Bradstreet ZAP Data, and McDonalds Corp.

## APPENDIX B: ECONOMIC PROFILE OF FOOD SERVICES INDUSTRIES

**TABLE B**  
**Economic Profile of Food-Services Industries: Distribution of Establishments By Size of Workforce, 2006**

NAICS	Industry Descriptions	Establishments	Employment	1-19	20-49	50-99	100-249	250-499	500-999	1000+
7221	Full-Service	6,228	113,893	28,002	33,287	30,547	21,434	624	0	0
	<i>Steakhouse</i>	146	2,650	655	779	715	502	0	0	0
	<i>Other beef rest.</i>	3,294	60,256	14,810	17,605	16,156	11,336	350	0	0
	<i>Oth poultry- fish</i>	209	3,798	939	1,116	1,024	719	0	0	0
	<i>All others</i>	2,580	47,189	11,598	13,787	12,652	8,878	274	0	0
7222	Limited-Service	6,484	90,784	34,996	43,145	9,253	2,042	674	674	0
	<i>Hamburger</i>	667	9,211	3,604	4,444	953	210			0
	<i>Other fastfood</i>	615	8,475	3,316	4,088	877	193			0
	<i>All others</i>	5,202	73,098	28,076	34,613	7,423	1,638	674	674	0
7223	Special Food Svs	636	12,347	3,308	2,280	1,429	2,629	256	1,372	1,072
		13,348	217,024	66,306	78,712	41,228	26,105	1,529	2,047	1,072

Source: Applied Development Economics, based on US BLS County Business Patterns, California EDD LMID, Dun and Bradstreet ZAP Data

## APPENDIX C: AMOUNT OF BEEF PREPARED BY SELECT NATIONAL CHAINS

---

**TABLE C**  
**Estimate of Amount of Beef Prepared By Select National Chain Steakhouse and Hamburger Restaurants**

Select Restaurant	Typical Number of Employees Per Restaurant	Typical Revenues	Typical SQFT	Annual Beef (lbs)	Annual Beef (lbs) (pre-cook)	Wkly Beef (lbs)	Daily Beef (lbs)	Annual Beef per worker	Annual Beef per sq ft
Outback	55	\$2,684,121	5,250	46,014	61,351	1,180	169	1,115	12
Sizzler	40	\$1,962,791	5,500	33,648	44,864	863	123	1,133	8
Texas Roadhouse	56	\$2,336,880	6,600	49,529	66,038	1,270	181	1,179	10
Carl's Jr.	26	\$1,345,203	3,250		39,884	767	110	1,530	12
Burger King	30	\$1,272,448	3,100		28,860	555	79	964	9
Steak Group	50	\$2,323,366	5,818	43,431	57,908	1,114	159	1,147	10
Hamburger Group	28	\$1,308,825	3,175		34,372	661	94.5	1,247	10.5

Source: Applied Development Economics, based on corporate annual report of Outback, Sizzler and Texas Roadhouse, Carl's Jr., Burger King (data from various web sources) and BAAQMD

## APPENDIX D: AGGREGATE ANNUAL AMOUNT OF PREPARED BEEF

**TABLE D**  
**Aggregate Annual Amount of Beef Prepared By Restaurant By Size Category**

NAICS	Industry Descriptions	Establishments	1-19	20-49	50-99	100-249	250-499	500-999	1000 or more
7221	Full-Service	6,228	14,618,842	11,235,367	10,310,394	7,234,545	199,342	0	0
	<i>Steakhouse</i>	146	1,159,085	890,819	817,481	573,606	0	0	0
	<i>Other beef rest.</i>	3,294	10,479,825	8,054,310	7,391,223	5,186,236	160,149	0	0
	<i>Oth poultry- fish</i>	209	415,221	319,120	292,848	205,484	0	0	0
	<i>All others</i>	2,580	2,564,711	1,971,118	1,808,842	1,269,219	39,193	0	0
7222	Limited-Service	6,484	32,551,328	29,211,646	6,265,084	1,382,389	331,980	332,202	0
	<i>Hamburger</i>	667	6,078,972	5,455,286	1,170,007	258,162	0	0	0
	<i>Other fastfood</i>	615	2,796,417	2,509,512	538,220	118,758	0	0	0
	<i>All others</i>	5,202	23,675,939	21,246,849	4,556,857	1,005,469	331,980	332,202	0
7223	Special Food Svs	636	3,541,847	1,399,833	876,926	1,613,863	157,435	842,454	658,040
		13,348	50,712,017	41,846,846	17,452,404	10,230,797	688,756	1,174,655	658,040

Source: Applied Development Economics

## APPENDIX E: REVENUE-ADJUSTED AFTER-TAX NET PROFIT TRENDS

---

**TABLE E**  
**National Five-Year After Tax Net Profit Trends by Size of Establishments By Revenues:**  
**Food and Accommodations, 1999-2004 Five-Year Average**

	\$250,000- \$500,000	\$1,000,000- \$2,500,000	\$2,500,000- \$5,000,000	\$5,000,000- \$10,000,000	\$10,000,000- \$50,000,000	Group Average
Food-Accommodations	0.10%	2.57%	3.54%	2.70%	1.86%	2.15%
Food only (est.)	0.18%	4.73%	6.51%	4.97%	3.43%	3.96%

Source: Applied Development Economics, based on US IRS 1999-2004 for "food and accommodations"

## APPENDIX F: AFTER-TAX NET PROFIT TRENDS

---

**TABLE F**  
**National Five-Year After-Tax Net Profit Trends by Eating Establishments Only, 1999-2004**

	1999	2000	2001	2002	2003	2004	99-04
Businesses	218,519	222,783	226,206	237,531	242,914	243,964	
Average receipts	\$1,222,284	\$1,261,407	\$1,221,003	\$1,235,098	\$1,220,062	\$1,243,550	\$1,296,791
Net income before taxes rate as percent of receipts	4.83%	4.64%	4.58%	4.10%	4.15%	4.55%	4.07%
Net income after taxes rate as percent of receipts	4.25%	4.07%	3.86%	3.72%	3.74%	4.14%	3.96%

Source: Applied Development Economics, based on US IRS

## APPENDIX G: AFTER-TAX NET PROFIT TRENDS: SELECT RESTAURANTS

---

**TABLE G**  
**After-Tax Net Profit Rates Of Select Steakhouse Restaurants**

	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2003-2006</b>
Outback	6.2%	4.8%	4.1%	2.6%	4.2%
Sizzlers	1.6%	2.3%	1.0%	-6.3%	-0.5%
Texas Roadhouse	8.2%	6.3%	6.7%	5.8%	6.6%

Source: Applied Development Economics, based on corporate annual report of Outback, Sizzler, and Texas Roadhouse