

bae urban economics

**Socioeconomic Impacts of Proposed Rule 11-18: Reduction of Risk from Air Toxic Emissions at Existing Facilities**

Submitted to: Bay Area Air Quality Management District  
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## DESCRIPTION OF PROPOSED RULE AMENDMENT

The Bay Area Air Quality Management District (“Air District” or “BAAQMD”) proposes Regulation 11, Rule 18, Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18, or simply, the “Rule”) to ensure that facilities that emit toxic compounds do not pose an unacceptable health risk to nearby communities. This section describes the proposed rule in some detail, largely repeating the description found in the Staff Report describing the proposed rule.<sup>1</sup>

This report assesses socioeconomic impacts related to the implementation of proposed new Rule 11-18. This Rule would be the next step in the Air District’s efforts to protect public health from toxic air pollution. Rule 11-18 is expected to substantially reduce health risks posed by various facilities by requiring the implementation of all technically and economically feasible risk reduction measures on significant sources of toxic air contaminants (TACs). The Rule would potentially affect hundreds of facilities, including but not limited to data centers, petroleum refineries, a cement kiln, sewage plants, landfills, etc. These facilities emit a variety of TACs that can adversely impact public health. These pollutants include compounds such as diesel particulate matter (DPM), benzene, polycyclic aromatic hydrocarbons (PAHs), and 1,3-butadiene.

For almost 30 years, the Air District has implemented programs designed to identify and reduce the public’s exposure to TACs. A pollutant is considered toxic if it has the potential to cause adverse health effects such as cancer, birth defects, respiratory ailments, or other serious illness; Air District and state toxic programs have reduced the average Bay Area cancer risk resulting from exposure to TACs in our air by 83 percent over the last two decades. Rule 11-18 is the next step to protect the public from TACs.

Rule 11-18 would apply to a wide range of commercial, industrial, and municipal facilities including data centers, petroleum refineries, chemical plants, wastewater treatment facilities, foundries, forges, landfill operations, hospitals, crematoria, , power plants, colleges and universities, military facilities and installations, and airline operations. These facilities operate a wide variety of sources of toxic emissions, including diesel-fueled internal combustion engines, wastewater treatment operations, combustion sources, evaporative and fugitive emissions, etc. The Air District estimates that 384 facilities potentially could be impacted by this rule. Table 1 provides a general summary of the types of facilities involved. All major industrial sectors are represented. BAE estimates that 266 of the facilities are private-sector establishments.

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<sup>1</sup> From BAAQMD Staff Report, henceforth referred to as the "Staff Report."

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**Table 1: Impacted Facilities by Industry Sector**

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<b>Industry Sector</b>	<b>Sites</b>	<b>% Total</b>
Agriculture and Forestry	2	0.5%
Mining and Construction	3	0.8%
Manufacturing	75	19.5%
Wholesale Trade	20	5.2%
Retail Trade	3	0.8%
Transportation, Warehousing, and Utilities	35	9.1%
Information	5	1.3%
Financial Activities	20	5.2%
Professional & Business Services	32	8.3%
Educational & Health Services	46	12.0%
Leisure & Hospitality	5	1.3%
Other Services, except Public Administration	20	5.2%
Government (a)	118	30.7%
<b>Total, All Sites</b>	<b>384</b>	<b>100.0%</b>

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Notes:

(a) Government includes all publicly owned facilities regardless of sector.

Sources: BAAQMD, 2017; BAE, 2017.

## METHODOLOGY

The analysis begins with an overview of current demographic and economic conditions in the Air District region, to provide context for the impact analysis that follows. Following that overview, BAE provides more detail on the specific industries that may be affected by the rule revisions, including data on number of establishments as classified by number of employees, estimated revenues per employee, and net profits for each affected industry.

This report uses data from a number of sources, including County Business Patterns, the 2012 Economic Census, the US Bureau of Labor Statistics, the State of California's Employment Development Department (EDD) Labor Market Information Division and Department of Finance, the Internal Revenue Service, Dun & Bradstreet, and the Air District itself.

Using this information, BAE generated an overview of regional demographic and economic trends, developed a profile of potentially impacted business establishments, and estimated net income as percent of revenues. Because of the number of facilities affected, much of the analysis was done at the individual site level, in the form of a database linking various data about the individual sites, including industry sector, private/public sector status, employment, revenues, and net income.

These figures were then compared to the compliance costs associated with the revised Rule, and for private enterprises, a determination was made of the potential for these costs to be a significant portion of estimated rates of return (using a 10 percent impact threshold). However, many of the potentially impacted facilities are public entities, and thus could not be evaluated based on impacts on rates of return. These facilities are largely public utility districts or departments, and as such should be able to pass through any compliance costs to ratepayers, so potential socioeconomic impacts on these facilities have not been further assessed.

Next, BAE analyzed the potential for direct and indirect job losses using the IMPLAN input-output model. Finally, the potential for impacts on small businesses is assessed.

## REGIONAL TRENDS

### Regional Demographic Trends

Table 2 shows the population and household trends for the nine county Bay Area and California between 2000 and 2016. During this time, the Bay Area's population increased by 12.8 percent, compared to 15.9 percent for California as a whole. Similarly, the number of Bay Area households grew by 9.6 percent, compared to 12.5 percent growth statewide, as average household size increased in both geographies.

**Table 2: Population and Household Trends, 2000-2015**

<b>Bay Area (a)</b>	<b>2000</b>	<b>2016</b>	<b>Total Change 2000-2016</b>	<b>% Change 2000-2016</b>
<b>Population</b>	6,784,348	7,649,565	865,217	12.8%
<b>Households</b>	2,466,020	2,703,486	237,466	9.6%
<b>Average Household Size</b>	2.69	2.77		
<b>California</b>				
<b>Population</b>	33,873,086	39,255,883	5,382,797	15.9%
<b>Households</b>	11,502,871	12,941,948	1,439,077	12.5%
<b>Average Household Size</b>	2.87	2.97		

Notes:

(a) Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties.

Sources: California State Department of Finance, 2016; US Census, 2000; BAE 2017.

The Bay Area's slower growth is tied to its relatively built-out environment, compared to the state overall. While Central Valley locations, such as the Sacramento region, experienced large increases in the number of housing units, the Bay Area only experienced moderate increases in housing units.

## **Regional Economic Trends**

Table 3 shows jobs by sector in 2010 and 2015<sup>2</sup> for the Bay Area and California. In the five-year period between 2010 and 2015, the Bay Area's employment base grew by 17.5 percent, increasing from 3.2 million jobs to 3.7 million jobs, as the area economy has recovered from the depths of the Great Recession and continued to grow. The state saw somewhat smaller job growth, increasing by 12.3 percent from 14.7 million jobs in 2010 to 16.5 million jobs in 2015.

The largest non-government sectors in the Bay Area economy are Professional & Business Services; Education & Health Services; Leisure & Hospitality; and Retail Trade. These sectors each constituted nine percent or more of the region's total jobs in 2015. Overall, the Bay Area's economic base largely reflects the state's base, sharing a similar distribution of employment across sectors. One noteworthy variation is the high employment in the Professional & Business Services, which makes up 19.2 percent of employment in the Bay Area compared to only 15.1 percent statewide.

All industry sectors showed an increase in employment in the Bay Area between 2010 and 2015, with increases of greater than 20 percent in Mining, Logging, & Construction; Information; Professional & Business Services; and Leisure & Hospitality. Statewide growth was also over 20 percent in three of these four sectors; Information only grew by 12.6 percent, compared to 44.4 percent in the Bay Area, where the tech economy is driving growth. For both the Bay Area and the state, the slowest growth was in the Government sector.

## **Summary of Regional Trends**

The Bay Area economy is currently strong, with strong growth and recovery from the recession, particularly in professional services and technology-related industries. Population is also growing, albeit at a slower rate than jobs.

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<sup>2</sup> Most recent year for which full-year employment data were available at the time of analysis.



**Table 3: Jobs by Sector, 2010-2015 (a)**

Industry Sector	Bay Area					California				
	2010 (b)		2015 (c)		% Change 2010-2015	2010 (b)		2015 (c)		% Change 2010-2015
	Jobs	% Total	Jobs	% Total		Jobs	% Total	Jobs	% Total	
Agriculture	20,900	0.7%	21,800	0.6%	4.3%	382,800	2.6%	423,300	2.6%	10.6%
Mining, Logging, and Construction	132,600	4.2%	179,800	4.8%	35.6%	586,700	4.0%	756,400	4.6%	28.9%
Manufacturing	307,500	9.7%	333,600	9.0%	8.5%	1,244,000	8.5%	1,291,900	7.8%	3.9%
Wholesale Trade	113,200	3.6%	127,800	3.4%	12.9%	644,000	4.4%	721,200	4.4%	12.0%
Retail Trade	309,700	9.8%	345,700	9.3%	11.6%	1,517,700	10.3%	1,663,100	10.1%	9.6%
Transportation, Warehousing, and Utilities	89,500	2.8%	106,200	2.9%	18.7%	466,300	3.2%	554,000	3.4%	18.8%
Information	113,500	3.6%	163,900	4.4%	44.4%	429,000	2.9%	483,000	2.9%	12.6%
Financial Activities	168,400	5.3%	180,100	4.8%	6.9%	759,700	5.2%	797,400	4.8%	5.0%
Professional & Business Services	546,500	17.3%	716,100	19.2%	31.0%	2,076,900	14.2%	2,493,800	15.1%	20.1%
Educational & Health Services	474,500	15.0%	552,300	14.8%	16.4%	2,123,400	14.5%	2,456,200	14.9%	15.7%
Leisure & Hospitality	325,900	10.3%	405,100	10.9%	24.3%	1,501,600	10.2%	1,830,000	11.1%	21.9%
Other Services, except Public Administration	108,500	3.4%	123,600	3.3%	13.9%	484,900	3.3%	545,700	3.3%	12.5%
Government (d)	458,200	14.5%	468,100	12.6%	2.2%	2,448,400	16.7%	2,458,800	14.9%	0.4%
<b>Total, All Employment (e)</b>	<b>3,168,000</b>	<b>100.0%</b>	<b>3,723,800</b>	<b>100.0%</b>	<b>17.5%</b>	<b>14,665,300</b>	<b>100.0%</b>	<b>16,474,800</b>	<b>100.0%</b>	<b>12.3%</b>

## Notes:

(a) Includes all wage and salary employment.

(b) Represents annual average employment for calendar year 2010.

(c) Represents annual average employment for calendar year 2015.

(d) Government employment includes workers in all local, state and Federal workers, not just those in public administration. For example, all public school staff are in the Government category.

(e) Totals may not sum from parts due to independent rounding.

(f) Santa Clara County data is for MSA, which includes San Benito County. As of 2014, San Benito had approximately 16,100 wage and salary jobs, an insignificant number relative to the Bay Area total.

Sources: California Employment Development Department, 2016; BAE, 2016.

## SOCIOECONOMIC IMPACTS

This section of the report analyzes socioeconomic impacts stemming from Rule 11-18. In order to estimate the economic impacts of the changes to the Rule, this report compares the affected facilities' annualized compliance costs with their rates of return. The following analysis uses data from the Air District, Dun & Bradstreet, County Business Patterns, IMPLAN, the IRS, and the 2012 US Economic Census.

The Air District analyzed its databases and to discern the types of establishments that might be subject to the Rule and has identified 384 facilities sites across a broad range of industries and establishments that could potentially be impacted by the new Rule. The list includes both private and public sector entities. Appendix A provides a detailed listing of these facilities.

In addition to direct impacts, any decline in revenues for the directly affected industries may result in a "ripple effect" through the regional economy. These effects are analyzed by utilizing the IMPLAN input-output model, as discussed in the section on regional impacts below.

### **Affected Industries**

The Air District has estimated the number of affected sites by industry as shown in Table 1 above. Table 4 below shows potentially impacted facility types by sources of emission and primary risk drivers. Given the large number of sites potentially impacted, BAE developed a database of these sites with each site comprising a single record in the database, and entered information as available for each of the sites. This included the base information from the District on business name, site location, type of activity, NAICS code, and risk drivers. As additional information was gathered, it was entered into or linked to this database on a per-facility basis.

For example, BAE searched for each establishment in a Dun & Bradstreet's database, which for many sites provided an estimate of employment and branch/headquarters/single location status. Economic Census data on revenues per employee by NAICS code was also linked, with the combination of Duns and Economic Census data then providing estimates of total revenue by location. IRS data on returns by sector was linked; in combination with the revenue estimates, this provided an estimate of the dollar amount of profit per establishment that could then be used in the impact analysis.

It should be noted, however, that for a substantial number of locations, one or more data points were lacking. These sites were excluded from the direct analysis, but potential impact levels relative to rate of return could be inferred from the range of impacts for those businesses for which data were available.

**Table 4: Summary of Toxic Air Contaminant Emitting Facilities and Sources**

<b>Facility</b>	<b>Sources</b>	<b>Primary Risk Driver(s)</b>	<b>Estimated Range of Health Risks</b> (in a million)
Refineries	Fugitive Emissions Stack Emissions Diesel Engines Cooling Towers Waste Water Treatment Operations	Benzene Diesel PM Formaldehyde 1,3-Butadiene Chromium VI Nickel	13 - 56
Data Centers	Stationary Diesel Engines	Diesel PM	3 - 24
Cement Manufacturing	Stack Emissions Fugitive Emissions	Chromium VI	9 - 40
Chemical Plants	Stack Emissions Fugitive Emissions	Formaldehyde Carbon Tetrachloride Sulfuric Acid Mist Diesel PM	12
Crematoria	Stack Emissions	Chromium VI Mercury	10 - 14
Landfills	Fugitive Emissions Diesel Engines	Vinyl Chloride Hydrogen Sulfide Benzene Diesel PM Acrylonitrile	11 - 23
Foundries / Metal Melting	Fugitive Emissions	Dioxins Manganese Lead Chromium VI Mercury Cadmium Nickel Arsenic PAHs Copper	17 - 40
Sewage Treatment Facilities	Fugitive Emission Stack Emissions	Diesel PM Hydrogen Sulfide Cadmium Mercury	9 - 40

<b>Facility</b>	<b>Sources</b>	<b>Primary Risk Driver(s)</b>	<b>Estimated Range of Health Risks</b> (in a million)
Power Plants	Stack Emissions	Formaldehyde Ammonia Benzene Diesel PM	5 - 17
Gasoline Stations	Fugitive Emissions	Benzene Ethyl Benzene 1,3-Butadiene	10 - 31
Military Facilities	Diesel Engines	Diesel PM	n/a
Manufacturing	Diesel Engines	Diesel PM	7 - 14
Hospitals / Medical Facilities	Diesel Engines EtO Sterilizers Stack Emissions	Diesel PM EtO Formaldehyde	2 - 23

As shown in Table 3 above, the facilities encompass all major sectors of the economy. According to the estimates derived from the US Census, in 2015 the Bay Area had approximately 200,000 private-sector establishments with a total of slightly less than 3.4 million jobs, or an average of 17 jobs per establishment (see Table 5). Only approximately 0.13 percent of private-sector establishments would be impacted by this Rule.

**Table 5: Profile of Affected Industries**

Major Industry Group	NAICS	Employment (a)	Average Employment		Number of Establishments (by workforce size)						Total
			per Establishment		1-4	5-9	10-19	20-49	50-99	100+	
Agriculture, forestry, fishing and hunting	11	1,869	8		167	27	16	14	6	2	232
Mining, quarrying, and oil and gas extraction	21	1,075	14		37	10	8	15	5	1	76
Utilities	22	12,885	98		50	28	18	20	5	11	132
Construction	23	170,364	11	9,878	2,636	1,644	1,024	365	237	15,784	
Manufacturing	31-33	241,068	31	3,201	1,501	1,246	1,039	431	450	7,868	
Wholesale trade	42	211,848	21	5,231	1,945	1,351	913	321	334	10,095	
Retail trade	44-45	351,371	16	9,445	5,246	3,416	2,259	891	649	21,906	
Transportation and warehousing	48-49	90,434	24	1,915	699	544	385	158	136	3,837	
Information	51	259,694	46	2,808	739	643	622	306	485	5,603	
Finance and insurance	52	151,496	13	6,730	2,095	1,204	775	243	204	11,251	
Real estate and rental and leasing	53	60,836	6	8,009	1,632	727	359	97	54	10,878	
Professional, scientific, and technical services	54	379,594	12	22,497	4,390	2,682	1,903	702	572	32,746	
Management of companies and enterprises	55	122,473	87	448	213	190	240	126	188	1,405	
Administrative & support & waste management & remediation services	56	223,922	23	5,315	1,531	1,110	905	437	404	9,702	
Educational services	61	119,489	31	1,727	662	606	528	202	142	3,867	
Health care and social assistance	62	417,493	18	12,009	5,336	3,001	1,628	588	583	23,145	
Arts, entertainment, and recreation	71	66,834	22	1,544	437	347	348	173	128	2,977	
Accommodation and food services	72	360,394	18	5,973	3,987	4,883	4,052	1,042	319	20,256	
Other services (except public administration)	81	136,963	8	10,448	3,372	1,689	898	253	117	16,777	
Industries not classified	99	1,117		986	24	4	-	-	-	1,014	
<b>Totals</b>		<b>3,381,219</b>	<b>17</b>	<b>108,418</b>	<b>36,510</b>	<b>25,329</b>	<b>17,927</b>	<b>6,351</b>	<b>5,016</b>	<b>199,551</b>	

Notes:

Sources: U.S. Census County Business Patterns, 2015; BAE, 2017.

## **Compliance Costs**

The Air District has identified a range of compliance measures for potential impacted projects. These include the following:

- Limiting Throughput or Operating Hours
- Baghouses
- Carbon Absorption
- Oxidation Catalysts
- Diesel Particular Filters
- New Diesel Internal Combustion Engines
- Thermal Oxidizers
- Wet Gas Scrubbers
- Electrostatic Precipitators
- Improved Equipment/Enhanced Monitoring/Other Process Improvements
- Increasing Stack Height

Given the large number of locations that may be impacted and limited knowledge regarding compliance measures and associated costs at particular sites, it was not feasible to generate precise estimates of the costs for each establishment. Instead, BAAQMD has provided general estimates of the compliance measures and associated costs by major facility type/activity per Table 6 below. Low and high costs estimates are provided for applicable measure, to show the range of potential impacts.

As indicated in the table, not all facilities are expected to require substantial expenditures on compliance measures, with many sites meeting the Rule through operating time restrictions, stack height increase or other no- or low-cost measures.

**Table 6: Air Pollution Control Equipment Expected to be Installed under Rule 11-18**

Industrial Sector	Number of Facilities	Diesel Particulate Filter	New Diesel ICEs	Baghouse with HEPA Filters	Carbon Adsorption	Oxidation Catalyst	Thermal Oxidizer	Wet Gas Scrubber	Electrostatic Precipitators
<i>Annualized Control Costs per Source:</i>		\$14k – 168k	\$500k – \$1 MM	\$70k – \$2.1 MM	\$42k – 480k	\$120k – \$230k	\$32k – \$630k	\$1MM – \$3MM	\$500k – \$5.6MM
Cement Mfr.	1			1					1
Chemical Plants	4				2			4	
Chrome Plating	1			1					
Coating Ops	1								
Concrete Batch Ops	1								
Crematoria	12			5					
Data Centers	3	10	10						
Emergency Engines	37	18	20						
Engines & Other Sources	50	42	42						
Hospitals	40	10	4						
Landfills	27					4	4		
Loading / Tank Ops	1				1				
Metal Melting	5			1	2				1
Metal Recycling	1								
Misc. Mfr.	15	6	8						
Power Plants	18			2					
Refineries	5	4		2				3	3
Research	1		1						
Sewage Treatment	31				1	3	4	3	
Other	130	10	15			3	2		
<b>Total</b>	<b>384</b>	<b>100</b>	<b>100</b>	<b>12</b>	<b>6</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>5</b>

## Impacts on Affected Industries

Given the large number of potentially affected sites, the broad range of industries, the wide variability in costs for mitigating the impacts, and the limited information available, the analysis here does not “drill down” to the level of individual establishments. Instead, it provides a measure of the number of facilities that might be *potentially* impacted, with the understanding that many of these potentially impacted facilities would not necessarily need to engage in the expenditures as shown above in Table 6.

### **Methodology**

Since it is not possible at this time in the Rule process to determine the compliance measures and specific costs associated with particular facilities, BAE has developed a methodology to estimate the costs based on available information from BAAQMD on types of measures and a range of costs by type of facility. Also utilized was information on employment and corporate structure from Dun & Bradstreet, corporate earnings, establishment counts, and employment from the 2012 Economic Census undertaken by the U.S. Bureau of the Census, and historic data on corporate earnings and rate of return by industry from the Internal Revenue Service.

The analysis here measures impacts based on changes in net income. In its report on returns of active corporations, the Internal Revenue Service (IRS) provides annual data on total sales and net income for public companies across the broad spectrum of the private sector. For this analysis, 10-year averages were used, such that the impacts of any particular year’s performance due to economic fluctuations are lessened. The rates of return were computed as available for each industry under consideration and entered into the facilities database based on NAICS code.

The Dun & Bradstreet data provided estimates of employment at individual facilities, along with information on corporate structure used to screen for small stand-alone businesses. Dun & Bradstreet data were not available for all of the facilities, limiting analysis of potential impacts to 187 of the total 266 private-sector facilities.

The Economic Census was utilized to calculate estimates of per-employee revenues by industry; these estimates were then multiplied by the employment data from Dun & Bradstreet to generate revenue estimates for each facility for which sufficient data were available.

BAAQMD provided annualized cost estimates for compliance measures, as shown above in Table 6, in the form of a minimum and maximum cost for each measure. This table also provides an estimate by major industry sector of the number of point sources requiring the listed compliance measures. BAE then used this to generate low, median, and high cost estimates by major industry sector, which were then applied to each private-sector facility listed in the database.

Finally, the potential impacts of these costs on rate of return as estimated per IRS data to determine whether the cost impacts met the criterion of a greater than 10 percent impact on the rate of return.



## Affected Industries and Regional Impacts

Table 7 below shows the proportion of facilities in each major industrial sector with potential significant impacts due to an over 10 percent impact on the estimated rate of return. The proportion is calculated for low cost, median cost, and high cost scenarios as discussed above.

There is considerable variability by sector and cost level in the proportion of potentially impacted facilities; for example, cement manufacturing and chemical plants show no significantly impacted facilities for the low-cost scenario, but all facilities could be significantly impacted under the median and high cost scenarios. Other sectors, such as chrome plating, crematories, and power plants show a high proportion of potentially impacted facilities even under the low cost scenario.

For a particular business establishment, though, these factors may vary considerably from the assumptions here. In particular, to the extent that mitigation costs are fixed, larger firms would be better able to absorb these costs. It is also likely that larger facilities would face higher costs due to more point sources requiring abatement.

**Table 7: Percent of Potentially Impacted Facilities by Major Industrial Sector**

Industry Sector	Low Cost		Median Cost		High Cost	
	Total Facilities	Percent Impacted	Total Facilities	Percent Impacted	Total Facilities	Percent Impacted
Cement Manufacturing	1	0%	1	100%	1	100%
Chemical Plants	4	0%	4	100%	4	100%
Chrome Plating	1	100%	na	na	na	na
Coating	1	0%	1	0%	1	0%
Concrete Batch Operations	1	0%	1	0%	1	0%
Crematories	10	90%	7	100%	7	100%
Data Centers	1	0%	na	na	na	na
Emergency Engines	12	33%	na	na	na	na
Engines and Other Sources	26	19%	21	81%	21	95%
Hospital / Medical	26	0%	22	45%	22	91%
Landfills	14	50%	14	100%	14	100%
Loading/Tanks	1	0%	1	100%	1	100%
Metal Melting	5	20%	3	67%	3	67%
Metal Recycling	2	0%	na	na	na	na
Miscellaneous Manufacturing	16	0%	15	80%	15	93%
Power Plants	9	89%	8	100%	8	100%
Refineries	3	0%	3	0%	3	67%
Research	1	100%	na	na	na	na
Other	53	28%	44	61%	44	84%
<b>Total</b>	<b>187</b>	<b>27%</b>	<b>145</b>	<b>71%</b>	<b>145</b>	<b>90%</b>

**Notes:**

The percent impact represents the percent of total facilities that might be impacted if they had to install control equipment at the cost level estimated. Thus the percent impacted provides an upper threshold indicator of potential impacts. Not all such facilities will need to implement these control measures, as they might be able to undertake no- or low-cost alternatives such as increased stack height or reduced operating hours. The actual number and proportion of impacted facilities thus might be less than indicated here. See text for explanation of cost definitions. A facility is considered impacted if the costs are greater than 10 percent of estimated profit. Excludes public sector facilities. See text for explanation. Includes only facilities for which data on employment, total revenues, and profit margins were available.

Sources: BAAQMD; Dun & Bradstreet; Internal Revenue Service; U.S. Census Bureau Economic Census; BAE, 2017.

However, it is important to note that given the available data, it is not possible to predict precisely which of the potentially affected facilities will actually be significantly impacted, since some facilities will be able to forgo the improvements and meet the Rule through no- or low-cost solutions. The above table should be used as an indicator of the highest potential impacts; for example, given the estimates here, no more than 27 percent of the privately operated facilities should have their profits significantly impacted by Rule 11-18; the proportion goes up substantially under the median and high cost scenarios. The actual proportion impacted under each scenario will likely be lower, especially to the extent smaller facilities with lower revenues are able to implement no- or low-cost solutions.

## **Regional Impacts**

For this analysis, it is assumed that the costs of new control equipment would result in equivalent lower total revenues, and that the expenditures for additional air pollution equipment would not circulate through the local economy. It is likely that actual impacts would be lower than shown here, since some equipment could be purchased and/or produced locally, and costs would not necessarily translate to a decline in gross revenues, e.g., the costs could be expensed to lower taxes. While the particular facilities to be affected are not necessarily known, the overall cost impacts as estimated by sector and shown in Table 6 above are assumed to occur somewhere in the local economy and thus have a direct effect on jobs and the impact equivalent to a decline in output (total revenues).

In addition to these direct impacts, there would be indirect and induced impacts on the regional economy. Indirect and induced impacts refer to regional multiplier effects of increasing or decreasing regional economic activity. If the Rule were to significantly impact local businesses, any closures would result in direct regional economic losses. Firms would no longer buy goods from local suppliers, thereby resulting in reduced indirect impacts, or business-to-business expenditures. In addition, firms would no longer employ regional residents, resulting in induced impacts due to decreases in household spending. Because there is the potential for the proposed Rule to result in significant direct impacts for the sectors listed above, the analysis uses the IMPLAN input-output model to estimate the indirect or induced impacts.

### ***IMPLAN Input-Output Model***

Regional and national input-output models have been used for years by economists as a tool to understand the extremely complex interactions among the various parts of an economy. The economic model used in this analysis, IMPLAN (“IMpact analysis for PLANning”), is a PC-based computer software package that automates the process of developing input-output models for regions within the United States. At the heart of the model is an input-output dollar flow table. For the specified region, the input-output table accounts for all of the dollar flows between the different sectors within the economy. Using this information, the IMPLAN software models the way income injected into one sector is then spent, and re-spent in other sectors of the economy, generating waves of economic activity, or so-called “economic multiplier” effects.

Regions studied using the IMPLAN model can be defined at various geographic levels to fit the particular analysis. The developers of the IMPLAN model maintain large databases of economic and trade data that are collected and published by the federal government, which they compile and format for use in the computer model. The data regarding input-output relationships between sectors used in the model for this analysis are from 2015 (latest currently available), and have been adjusted to provide results expressed in 2017 dollar figures. The data that IMPLAN uses are customized to reflect the specific, detailed economic characteristics of each individual county that is included within the specified regional study area. The IMPLAN model in turn is able to summarize the economic effects of a given economic “event” that is input into the model, expressing the impacts in terms of direct, indirect, and induced jobs and output by industry sector.

- **Direct Impacts.** Direct impacts refer to the dollar value of economic activity available to circulate through the economy.
- **Indirect Impacts.** The indirect impacts refer to the inter-industry impacts of the input-output analysis, which would include any payments that the directly impacted industries make to other businesses in the region for goods and services.
- **Induced Impacts.** The induced impacts refer to the impacts of household expenditures in the model. When households earn income, they spend part of that income on goods and services. The model treats households as an “industry” in determining their local expenditure patterns in the model, based on the availability of goods and services within the geography.

The IMPLAN model is well respected as the industry standard for projecting economic impacts resulting from future “events.” In this study, the projected loss of sales in the three impacted industries makes up the “events” in the IMPLAN model.

### ***Economic Impacts of Increased Costs in Impacted Industries***

Mirroring the methodology above, where potential costs were modelled based on low, median, and high costs for various major industry groupings, the IMPLAN analysis looks at the estimated impacts based on the same range of costs, for the number of industries and impact types as shown in Table 6 above. As noted previously, it is assumed that the costs would result in equivalent lower revenues, and that the expenditures would not circulate through the local economy.

Table 8 shows the direct, indirect, and induced regional impacts from annual economic output due to the decline in operating revenues flowing through the Air District economy. The total reduction in annual economic output is estimated to range from \$90 to \$294 million with a related annual loss of 355 to 1,105 jobs. It should be noted that this is based on assumptions derived from a variety of sources regarding modification/control costs, mix of industries, and typical industries as grouped.

As context, the IMPLAN model estimates the gross annual regional product for the nine-county Bay Area at approximately \$737 billion; the possible reduction is equivalent to 0.04 percent or less of total economic output for the region, and 0.02 percent or less of total jobs.

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**Table 8: Regional Economic Impacts**

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**Low Cost Scenario**

	<u>Employment</u>	<u>Output</u>
<b>Direct (a)</b>	-191.1	-\$59,875,328
<b>Indirect (b)</b>	-81.0	-\$15,960,258
<b>Induced (c)</b>	-82.8	-\$14,149,793
<b>Total</b>	<b>-354.9</b>	<b>-\$89,985,378</b>

**Median Cost Scenario**

	<u>Employment</u>	<u>Output</u>
<b>Direct (a)</b>	-389.6	-\$128,011,418
<b>Indirect (b)</b>	-166.4	-\$33,972,815
<b>Induced (c)</b>	-174.4	-\$29,799,658
<b>Total</b>	<b>-730.4</b>	<b>-\$191,783,890</b>

**High Cost Scenario**

	<u>Employment</u>	<u>Output</u>
<b>Direct (a)</b>	-588.0	-\$196,147,507
<b>Indirect (b)</b>	-251.9	-\$51,985,372
<b>Induced (c)</b>	-266.0	-\$45,449,522
<b>Total</b>	<b>-1,105.9</b>	<b>-\$293,582,402</b>

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(a) Based on the initial loss of sales and employment, direct impacts measure the reduction of dollars available to then flow through the local economy.

(b) Indirect Impacts refer to business-to-business impacts.

(c) Induced impacts occur when workers spend their household incomes throughout the local economy.

Sources: IMPLAN; BAAQMD; BAE.

## Impacts on Small Businesses

According to California Government Code 14835, a small business is any business that meets the following requirements:

- 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 average annual gross receipts of \$10 million or less over the previous three tax years, or
  - A manufacturer with 100 or fewer employees.

BAE has estimated the number of sites/businesses impacted by Rule 11-18 that qualify as small business based on employment and ownership information from Dun & Bradstreet, revenues calculated as above, and public/private sector status. This list may be incomplete due to missing data for individual records, so the numbers here may under-represent the total. Based on the screening criteria and available data, BAE estimates that there are at least 43 qualifying businesses, or slightly less than 10 percent of all potentially impacted locations (or about 14 percent of all private sector sites).

As with the overall impact analysis above, the analysis here looks at facilities that could be *potentially* impacted; particular establishments may be impacted, depending on the costs of the actual measures taken to be in compliance with Rule 11-18. The actual number of businesses impacted may be smaller.

Small business status was inferred based on information from the Dun & Bradstreet database, which has data for employment at a site and whether or not that facility is the branch of a larger corporate entity. Among the 266 private businesses potentially impacted by Rule 11-18, the Dun & Bradstreet data indicated that 34 of these were small businesses per BAAQMD's standard definition of a small business. Since not all 266 records had all the data fields required to determine small business status, it is possible that there are other small businesses.

**Table 9: Percent of Potentially Impacted Small Business Facilities by Major Industrial Sector**

Industry Sector	Low Cost		Median Cost		High Cost	
	Total Facilities	Percent Impacted	Total Facilities	Percent Impacted	Total Facilities	Percent Impacted
Cement Manufacturing	na	na	na	na	na	na
Chemical Plants	1	0%	1	100%	1	100%
Chrome Plating	1	100%	1	100%	1	100%
Coating	na	na	na	na	na	na
Concrete Batch Operations	na	na	na	na	na	na
Crematories	7	100%	7	100%	7	100%
Data Centers	na	na	na	na	na	na
Emergency Engines	5	60%	5	100%	5	100%
Engines and Other Sources	4	25%	4	100%	4	100%
Hospital / Medical	na	na	na	na	na	na
Landfills	3	100%	3	100%	3	100%
Loading/Tanks	na	na	na	na	na	na
Metal Melting	1	100%	1	100%	1	100%
Metal Recycling	na	na	na	na	na	na
Miscellaneous Manufacturing	na	na	na	na	na	na
Power Plants	na	na	na	na	na	na
Refineries	na	na	na	na	na	na
Research	na	na	na	na	na	na
Other	12	75%	12	100%	12	100%
<b>Total</b>	<b>34</b>	<b>74%</b>	<b>34</b>	<b>100%</b>	<b>34</b>	<b>100%</b>
<b>Total Impacted</b>	<b>25</b>		<b>34</b>		<b>34</b>	

## Notes:

The percent impact represents the percent of total small business facilities that might be impacted if they had to install control equipment at the cost level estimated. Thus the percent impacted provides an upper threshold indicator of potential impacts. Not all such facilities will need to implement these control measures, as they might be able to undertake no- or low-cost alternatives such as increased stack height or reduced operating hours. The actual number and proportion of impacted facilities thus might be less than indicated here. See text for explanation of cost definitions. A facility is considered impacted if the costs are greater than 10 percent of estimated profit. Excludes public sector facilities. See text for explanation. Includes only facilities for which data on employment, total revenues, and profit margins were available.

Sources: BAAQMD; Dun & Bradstreet; Internal Revenue Service; U.S. Census Bureau Economic Census; BAE, 2017.

Based on the detailed analysis as shown above in Table 9, a substantial percentage of small businesses could be significantly impacted by the costs of compliance with Rule 11-18. For the low cost scenario, nearly three-fourths of small business facilities could potentially face annualized costs greater than 10 percent of profits, and 100 percent of small business facilities could potentially face those levels of costs if median or high annualized costs for compliance were required.

## APPENDIX A: RULE 11-18 POTENTIALLY IMPACTED FACILITIES

<u>Facility #</u>	<u>Facility Name</u>	<u>Source Types</u>	<u>Location Address</u>	<u>Location City</u>	<u>Zip Code</u>
10	Chevron Products Company	Refinery	841 Chevron Way	Richmond	94802
11	Shell Martinez Refinery	Refinery	3485 Pacheco Blvd	Martinez	94553
12	NRG Delta, LLC	Engines and Other Sources	696 W 10th Street	Pittsburg	94565
17	Lehigh Southwest Cement Company	Cement Mfg	24001 Stevens Creek Blvd	Cupertino	95014
18	NRG Delta, LLC	Emergency Engines	3201 Wilbur Avenue	Antioch	94509
23	Chemtrade West US LLC	Chemical Plant	525 Castro Street	Richmond	94801
31	Dow Chemical Company	Chemical Plant	901 Loveridge Road	Pittsburg	94565
41	Owens Corning Insulating Systems, LLC	Misc. Mfg.	960 Central Expressway	Santa Clara	95050
49	Chevron Products Company	Other	1020 Berryessa Road	San Jose	95133
51	United Airlines, Inc	Engines and Other Sources	800 So Airport Boulevard	San Francisco	94128
55	Lockheed Martin Corporation	Misc. Mfg.	1111 Lockheed Martin Way	Sunnyvale	94089
59	University of California, Berkeley	Engines and Other Sources	Berkeley Campus	Berkeley	94720
62	A B & I Foundry	Metal Melting	7825 San Leandro St	Oakland	94621
64	Equilon Enterprises LLC-San Jose Terminal	Petroleum Distribution	2165 O'Toole Avenue	San Jose	95131
72	Chevron Inc (Americas OE/HES)	Other	155 Castro Street	Richmond	94802
83	United States Pipe & Foundry Company, LLC	Metal Melting	1295 Whipple Road	Union City	94587
85	HGST, a Western Digital Company	Engines and Other Sources	5601 Great Oaks Pkwy	San Jose	95119
91	Chevron Avon Terminal	Petroleum Distribution	611 Solano Way	Martinez	94553
148	Ball Metal Beverage Container Corp	Misc. Mfg.	2400 Huntington Drive	Fairfield	94533
167	Kraft Heinz Foods Company	Misc. Mfg.	100 Halcyon Drive	San Leandro	94578
194	PCC Structural - San Leandro	Metal Melting	414 Hester Street	San Leandro	94577
208	Schnitzer Steel Products Company	Metal Recycling	1101 Embarcadero W	Oakland	
227	Criterion Catalysts Company LP	Misc. Mfg.	2840 Willow Pass Road	Pittsburg	94565
246	HP Inc	Other	1501 Page Mill Road	Palo Alto	94304
281	U S Veterans Administration Medical Center	Hospital / Medical	4951 Arroyo Road	Livermore	94550
290	DOE-KAO Sandia National Laboratories	Other	7011 East Avenue	Livermore	94550
423	Chevron Richmond Technology Center	Other	100 Chevron Way	Richmond	94802
450	Veterans Administration Medical Center	Hospital / Medical	3801 Miranda Avenue	Palo Alto	94304
453	Good Samaritan Hospital	Hospital / Medical	2425 Samaritan Drive	San Jose	95124
459	Veterans Administration Medical Center	Hospital / Medical	4150 Clement Street	San Francisco	94121
460	Alta Bates Hospital	Hospital / Medical	2450 Ashby Avenue	Berkeley	94705
475	Santa Clara Valley Health & Hospital System	Hospital / Medical	751 So Bascom Avenue	San Jose	95128
479	Treasure Island - US Navy BRAC PMO-W	Sewage Treatment	Treasure Island	San Francisco	94130
541	Pacific Gas & Electric Co	Other	4690 Evora Road	Concord	94520
550	NASA-AMES Research Center	Research	Moffett Field NS	Mountain View	94035
556	SLAC National Accelerator Laboratory	Other	2575 Sand Hill Road	Menlo Park	94025
568	San Francisco South East Treatment Plant	Engines and Other Sources	1700 Jerrold Avenue	San Francisco	94124
581	ST Shore Terminals LLC	Petroleum Distribution	90 San Pablo Avenue	Crockett	94525
585	Varian Oncology Systems	Hospital / Medical	3120 Hansen Way, D 129	Palo Alto	94304
591	East Bay Municipal Utility District	Sewage Treatment	2020 Wake Avenue	Oakland	94607

595	Mission Valley Rock Co	Concrete	7999 Athenour Way	Sunol	94586
598	SRI International	Engines and Other Sources	333 Ravenswood Ave, mlstp AE128	Menlo Park	94025
617	Palo Alto Regional Water Quality Control Plant	Sewage Treatment	2501 Embarcadero Way	Palo Alto	94303
618	Univar USA Inc	Other	2256 Junction Avenue	San Jose	95131
621	City of Santa Clara	Power Plant	560 Robert Avenue	Santa Clara	95050
632	Intel Corporation	Engines and Other Sources	2150 Mission College Blvd	Santa Clara	95054
633	Intel Corporation	Engines and Other Sources	3065 Bowers Avenue	Santa Clara	95051
639	Stanford University	Engines and Other Sources	ESF-480 Oak Road	Palo Alto	94305
646	Siliconix, Incorporated/Vishay Siliconix	Other	2201 Laurelwood Road	Santa Clara	95054
653	Central Marin Sanitation Agency	Sewage Treatment	Andersen Drive, East end	San Rafael	94901
678	Port of Oakland	Engines and Other Sources	#1 Airport Drive	Oakland	94621
723	Lawrence Berkeley National Laboratory	Other	One Cyclotron Road	Berkeley	94720
733	City of Sunnyvale Water Pollution Control	Other	1440 Borregas Avenue	Sunnyvale	94089
778	San Jose-Santa Clara Regional Wastewater Facility	Sewage Treatment	700 Los Esteros Road	San Jose	95134
792	Washington Hospital	Hospital / Medical	2000 Mowry Avenue	Fremont	94538
861	San Mateo Water Quality Control Plant	Sewage Treatment	2050 Detroit Drive	San Mateo	94404
907	Central Contra Costa Sanitary District	Sewage Treatment	5019 Imhoff Place	Martinez	94553
935	Levin Richmond Terminal Corporation	Power Plant	402 Wright Avenue	Richmond	94804
994	Simonsen Laboratories, Inc	Laboratory Animals	1180 Day Road, Suite C	Gilroy	95020
1000	Seton Medical Center	Hospital / Medical	1900 Sullivan Avenue	Daly City	94015
1009	Hayward Waste Water Treatment Plant	Other	3700 Enterprise Ave	Hayward	94545
1067	Oro Loma Sanitary District	Sewage Treatment	2600 Grant Avenue	San Lorenzo	94580
1071	City of Petaluma, Dept of Water Resources & Convs	Sewage Treatment	3890 Cypress Drive	Petaluma	94954
1179	Redwood Landfill Inc	Landfill	8950 Redwood Hwy	Novato	94945
1194	Pinole-Hercules Wastewater Treatment Plant	Sewage Treatment	11 Tennent Avenue	Pinole	94564
1209	Union Sanitary District	Sewage Treatment	5072 Benson Road	Union City	94587
1228	Sonoma County Water Agency	Sewage Treatment	22675 8th St, East	Sonoma	95476
1236	Town of Windsor	Other	8400 Windsor Road	Windsor	95492
1244	Silicon Valley Clean Water, San Carlos Pump Stn	Emergency Engines	150 Monte Vista	San Carlos	94070
1257	Genentech, Inc	Misc. Mfg. and Research	460 Point San Bruno Boulevard	South San Francisco	94080
1258	Delta Diablo Sanitation District	Sewage Treatment	2500 Pittsburg Antioch Hwy	Antioch	94509
1271	West County Wastewater District	Sewage Treatment	2377 Garden Tract Rd	Richmond	94801
1275	Novato Sanitary District	Sewage Treatment	500 Davidson Street	Novato	94947
1345	Sewerage Agency of South Marin	Other	450 Sycamore Avenue	Mill Valley	94941
1351	City of Burlingame, Waste Water Treatment Plant	Landfill and Sewage Treatment	1103 Airport Boulevard	Burlingame	94010
1352	St Helena Hospital	Hospital / Medical	10 Woodland Road	Saint Helena	94574
1371	Dublin San Ramon Services District - Wastewater TP	Sewage Treatment	7399 Johnson Drive	Pleasanton	94588
1403	City of Santa Rosa Wastewater Treatment	Sewage Treatment	4300 Llano Road	Santa Rosa	95407
1404	Fairfield-Suisun Sewer District	Sewage Treatment	1010 Chadbourne Road	Fairfield	94534
1427	Applied Materials	Misc. Mfg.	3050 Bowers Avenue	Santa Clara	95054
1462	Veterans Administration Medical Center	Hospital / Medical	795 Willow Road	Menlo Park	94025
1464	Acme Fill Corporation	Landfill	950 Waterbird Way	Martinez	94553
1502	O'Connor Hospital	Other	2105 Forest Avenue	San Jose	95128
1507	North San Mateo County Sanitation Dist	Other	153 Lake Merced Blvd	Daly City	94015



1529	Kaiser Permanente Medical Center	Hospital / Medical	280 W MacArthur Blvd	Oakland	94611
1533	Sewer Authority Mid-Coastside		1000 N. Cabrillo Highway	Half Moon Bay	94019
1534	Silicon Valley Clean Water	Sewage Treatment	Radio Road, End of	Redwood City	94065
1535	VIAMI	Other	2789 Northpoint Pkwy	Santa Rosa	95407
1567	Sonoma County Water Agency	Sewage Treatment	2025 Aviation Boulevard	Santa Rosa	95403
1597	Las Gallinas Valley Sanitary District	Sewage Treatment	300 Smith Ranch Road	San Rafael	94903
1634	Napa State Hospital	Hospital / Medical	2100 Napa Vallejo Hwy	Napa	94558
1700	California Pacific Med Ctr, Pacific Campus	Other	2333 Buchanan Street	San Francisco	94115
1713	Marin General Hospital	Hospital / Medical	250 Bonair Road	Greenbrae	94904
1753	John Muir Health - Concord Campus	Hospital / Medical	2540 East Street	Concord	94520
1784	San Francisco International Airport		SF Int'l Airport	San Francisco	94128
1785	Childrens Hospital, Oakland	Hospital / Medical	747 52nd Street	Oakland	94609
1791	City of Benicia	Sewage Treatment	614 5th Street	Benicia	94510
1794	Teikuro America Company, Ltd	Chrome Plating	31499 Hayman Street	Hayward	94544
1812	Kirby Canyon Recycling and Disposal Facility	Landfill	910 Coyote Creek, Golf Drive	Morgan Hill	95037
1820	Martinez Cogen Limited Partnership	Power Plant	550 Solano Way, Avon Refinery	Martinez	94553
1821	Kaiser Foundation Hospital	Other	1425 So Main Street	Walnut Creek	94596
1840	West Contra Costa County Landfill	Landfill	1 Parr Boulevard	Richmond	94801
1860	Laguna Honda Hospital	Other	375 Laguna Honda Boulevard	San Francisco	94116
1941	Sonoma Developmental Center	Engines and Other Sources	15000 Arnold Drive	Eldridge	95431
1982	County of Santa Clara	Landfill	Hellyer Park	San Jose	95111
2025	University of San Francisco	Engines and Other Sources	2130 Fulton Street	San Francisco	94117
2039	Potrero Hills Landfill, Inc	Landfill	3675 Potrero Hills Lane	Suisun City	94585
2059	Fujitsu Technology and Business of America, Inc	Data Center	1250 E Arques Avenue	Sunnyvale	94088
2066	Waste Management of Alameda County	Landfill	10840 Altamont Pass Rd	Livermore	94551
2087	St Francis Memorial Hospital	Hospital / Medical	900 Hyde Street	San Francisco	94109
2099	St Rose Hospital	Other	27200 Calaroga Ave	Hayward	94545
2168	Jelly Belly Candy Company	Other	One Jelly Belly Lane	Fairfield	94533
2172	Office of The Sheriff	Engines and Other Sources	SF County Jail, #5	San Bruno	94066
2227	Mills Peninsula Medical Center	Hospital / Medical	1501 Trousdale Drive	Burlingame	94010
2246	Tri-Cities Recycling	Landfill	7010 Auto Mall Pkwy	Fremont	94538
2266	Browning-Ferris Industries of CA, Inc	Landfill	12310 San Mateo Road	Half Moon Bay	94019
2320	Oak View Memorial Park	Other	2500 E 18th Street	Antioch	94509
2340	San Leandro Water Pollution Control Plant	Other	3000 Davis Street	San Leandro	94577
2344	Hilton San Francisco Union Square	Engines and Other Sources	333 O'Farrell Street	San Francisco	94102
2371	USS-POSCO Industries	Metal Melting	900 Loveridge Road	Pittsburg	94565
2440	Sequoia Hospital / Dignity Health	Hospital / Medical	170 Alameda, de las Pulgas	Redwood City	94062
2451	Pleasanton Garbage Service, Inc	Landfill	2512 Vineyard Avenue	Pleasanton	94566
2457	Regional Medical Center of San Jose	Hospital / Medical	225 N Jackson Avenue	San Jose	95116
2478	UCSF/Parnassus	Power Plant	3rd Avenue & Parnassus	San Francisco	94122
2482	City of Richmond Water Pollution Control District	Sewage Treatment	601 Canal Boulevard	Richmond	94804
2531	Santa Rosa Memorial Hospital	Hospital / Medical	1165 Montgomery Drive	Santa Rosa	95402
2634	StoneMor California Subsidiary, Inc	Crematory	2099 Reliez Valley Rd	Lafayette	94549
2721	City of Palo Alto Landfill	Landfill	Byxbee Park	Palo Alto	94301

2740	City of Mountain View (Shoreline Landfill)	Landfill	2600 Shoreline Boulevard	Mountain View	94043
2836	Pacific Gas & Electric Company	Engines and Other Sources	77 Beale Street	San Francisco	94105
2884	Union Sanitary Dist, Irvington PS	Engines and Other Sources	46525 Fremont Blvd	Fremont	94536
2957	Super Store Industries/Fairfield Dairy Division	Engines and Other Sources	199 Red Top Road	Fairfield	94533
3011	IPT SRI Cogeneration Inc	Power Plant	333 Ravenswood Drive	Menlo Park	94025
3152	Lam Research Corporation - Fremont Campus	Engines and Other Sources	4650 Cushing Pkwy	Fremont	94538
3166	Pacific Gas and Electric Company/Envr Field Svcs	Engines and Other Sources	4801 Oakport Street	Oakland	94601
3194	City of Alameda, Maint Serv Center	Landfill	Doolittle Drive	Alameda	94501
3256	Turk Island Solid Waste Disposal Site	Landfill	Union City Boulevard	Union City	94587
3294	Guadalupe Rubbish Disposal	Landfill	15999 Guadalupe Mines Rd	San Jose	95120
3312	Zanker Road Resource Management,Ltd	Other	705 Los Esteros Road	San Jose	95134
3314	Roselawn Cemetery	Crematory	1240 N Livermore Ave	Livermore	94550
3319	Vallejo Sanitation & Flood Control District	Sewage Treatment	450 Ryder Street	Vallejo	94590
3329	Saint Louise Regional Hospital	Hospital / Medical	9400 N Name Uno	Gilroy	95020
3335	Valley Memorial Hospital	Hospital / Medical	1111 E Stanley Blvd	Livermore	94550
3426	San Francisco Public Utilities Commision		2901 Crystal Springs Road	San Bruno	94066
3464	City of Santa Clara	Landfill	Lafayette Street	Santa Clara	95050
3499	City of Menlo Park	Landfill	Marsh Road	Menlo Park	94025
3590	City of Berkeley/Engr Div/Public Works	Landfill	Cesar Chavez Prk	Berkeley	94704
3670	Kaiser Foundation Hospital	Hospital / Medical	975 Sereno Drive	Vallejo	94589
3779	Contra Costa County	Power Plant	2500 Alhambra Avenue	Martinez	94553
3887	San Mateo Medical Center	Hospital / Medical	222 W 39th Avenue	San Mateo	94403
3919	Kaiser Permanente San Jose Medical Center	Hospital / Medical	250 Hospital Parkway	San Jose	95119
3926	Kaiser Permanente Medical Center	Hospital / Medical	2425 Geary Boulevard	San Francisco	94115
3969	Stanford Health Care	Hospital / Medical	300 Pasture Drive	Stanford	94305
3974	San Francisco General Hospital	Other	1001 Potrero Ave, Bldg 10, Rm 1118	San Francisco	94110
4007	Central Contra Costa Sanitary District	Emergency Engines	10 Camino Pablo	Orinda	94563
4020	SFPP, LP	Other	2150 Kruse Drive	San Jose	95131
4021	SFPP, LP	Other	950 Tunnel Avenue	Brisbane	94005
4047	Kaiser Foundation Hospital	Other	1200 El Camino Real	South San Francisco	94080
4116	San Francisco, City & County, PUC	Other	3500 Great Highway	San Francisco	94132
4134	Irvington Memorial Cemetery	Crematory	41001 Chapel Way	Fremont	94538
4193	AC Transit		2016 MacDonald Avenue	Richmond	94801
4205	Oak Hill Memorial Park & Mortuary	Crematory	300 Curtner Avenue	San Jose	95125
4272	El Camino Hospital	Other	2500 Grant Road	Mountain View	94040
4408	Mt View Sanitary District	Sewage Treatment	3800 Arthur Road	Martinez	94553
4429	NorthBay Medical Center	Other	1200 Gale Wilson Blvd	Fairfield	94533
4449	Electro-Coatings of California Inc	Other	893 Carleton Street	Berkeley	94710
4618	Keller Canyon Landfill Company	Landfill	901 Bailey Road	Pittsburg	94565
4682	UCSF/Laurel Heights	Research	3333 California Street	San Francisco	94118
4860	Pet's Rest Cemetery	Crematory	1905 Hillside Blvd	Colma	94014
4863	Pleasant Hill Cemetery	Crematory	1700 Pleasant Hill Rd	Sebastopol	95472
5095	Republic Services Vasco Road, LLC	Landfill	4001 N Vasco Road	Livermore	94550
5148	Castro Valley Crematory Inc	Crematory	21228 Redwood Road	Castro Valley	94546

5178	Kaiser Foundation Hospital	Hospital / Medical	401 Bicentennial Way	Santa Rosa	95403
5249	California State University, East Bay	Engines and Other Sources	25800 Carlos Bee Blvd	Hayward	94542
5433	Tulocay Cemetery Association	Crematory	411 Coombsville Rd	Napa	94558
5498	Randall-Bold Water Treatment Plant	Other	3760 Neroly Road	Oakley	94561
5691	Sunquest Properties Inc	Landfill	Landfill, Brisbane	Brisbane	94005
5755	UCSF/Mt Zion	Other	1600 Divisadero Street	San Francisco	94115
5791	Fairmont Memorial Park	Other	1901 Union Avenue	Fairfield	94533
5876	South San Francisco-San Bruno Water Quality Plant	Sewage Treatment	195 Belle Air Road	South San Francisco	94080
6044	O L S Energy-Agnews	Power Plant	3530 Zanker Road	San Jose	95134
6054	East Bay Municipal Utility District	Sewage Treatment	2755 Isabel Street	Richmond	94804
6061	Space Systems/Loral, LLC (Bldg 3)	Other	3825 Fabian Way	Palo Alto	94303
6127	Central Shops/City & County of San Francisco	Engines and Other Sources	1800 Jerrold Avenue	San Francisco	94124
6496	Golden Gate Bridge, Highway & Transportation Distr	Engines and Other Sources	Golden Gate, Bridge Toll Plaza	San Francisco	94129
6919	Applied Anodize Inc	Other	622 Charcot Ave, Unit D	San Jose	95131
7031	City of Richmond /City Managers Office	Emergency Engines	Castro St, Pumping Station	Richmond	94804
7101	Napa Sanitation District - Soscol	Sewage Treatment	1515 Soscol Ferry Rd	Napa	94558
7237	Chevron Business And Real Estate Services	Engines and Other Sources	6001 Bollinger Canyon Rd, Bldg J	San Ramon	94583
7243	Central Contra Costa Sanitary District	Emergency Engines	1790 School Street	Moraga	94556
7264	California Pacific Medical Center	Other	3700 California Street	San Francisco	94118
7265	San Jose State University (Cogen Plant)	Power Plant	10th & San Carlos St	San Jose	95192
7297	The Home Depot	Emergency Engines	1175 Admiral Callaghan Ln	Vallejo	94590
7441	Flextronics International, USA Inc	Misc. Mfg.	847 Gibraltar Drive	Milpitas	95035
7519	Pacific Bell	Emergency Engines	2525 N Watney Way	Fairfield	94533
7780	Alta Bates Summit Medical Center	Hospital / Medical	3100 Summit Street	Oakland	94623
7781	Alta Bates Summit Medical Center	Hospital / Medical	350 Hawthorne Ave	Oakland	94609
7958	Bubbling Well Pet Memorial Park, Inc	Crematory	5054 Peabody Road	Fairfield	94533
8017	Alameda County Water District	Sewage Treatment	42436 Mission Blvd	Fremont	94539
8020	Woodlawn Cemetery	Crematory	1000 El Camino Real	Colma	94014
8188	Wheeler & Zamaroni Landscape Supplies	Other	3500 Petaluma Hill Rd	Santa Rosa	95404
8227	Pacific Interment Service	Other	1094 Yerba Buena Ave	Emeryville	94608
8316	USCG Training Center	Engines and Other Sources	599 Tomales Road	Petaluma	94952
8399	Chapel of the Chimes Memorial Park	Crematory	32992 Mission Blvd	Hayward	94544
8664	Crockett Cogeneration, A Cal Ltd Partnership	Power Plant	550 Loring Avenue	Crockett	94525
8679	Kaiser Permanente	Other	901 Nevin Avenue	Richmond	94801
8834	Sonoma County Transit	Transit	355 W Robles Avenue	Santa Rosa	95407
9010	California Paperboard Corporation	Engines and Other Sources	525 Mathew Street	Santa Clara	95050
9013	International Disposal Corp of CA	Landfill	1601 W Dixon Landing Rd	Milpitas	95035
9183	Napa-Vallejo Waste Management Authority	Landfill	End of Eucalyptus Rd	Napa	94558
9310	San Francisco Marriott Hotel	Other	55 4th Street	San Francisco	94103
9339	San Jose State University	Other	One Washington Square	San Jose	95192
9653	Kaiser Permanente Medical Center	Hospital / Medical	39400 Paseo Padre Pkwy	Fremont	94538
9721	Apple Inc	Other	2 Infinite Loop	Cupertino	95014
10394	Stevens Creek Quarry Inc	Quarry	12100 Stevens Creek Road	Cupertino	95014
10438	Headway Technologies Inc	Other	497 So Hillview Dr	Milpitas	95035

10520	Communications & Power Industries	Misc. Mfg.	607 Hansen Way, B 550	Palo Alto	94803
10649	IMTT Richmond CA	Other	100 Cutting Boulevard	Richmond	94804
10742	John Muir Medical Center	Hospital / Medical	1601 Ygnacio Valley Road	Walnut Creek	94598
10861	Northrop Grumman Systems Corporation		401 E. Hendy Ave, 62/1	Sunnyvale	94088
11002	Applied Materials	Misc. Mfg.	974 E Arques Avenue	Sunnyvale	94085
11058	San Leandro Surgery Center	Hospital / Medical	15035 E. 14th Street	San Leandro	94578
11155	Hull's Walnut Creek Chapel	Crematory	1139 Saranap Avenue	Walnut Creek	94595
11180	Calpine Gilroy Cogen,LP & Gilroy Energy Center LLC	Power Plant	1400 Pacheco Pass Hwy	Gilroy	95020
11206	Phillip Burton Federal Bldg & US Courthouse	Government	450 Golden Gate Avenue	San Francisco	94102
11247	Clover Flat Resource & Recovery Park		4380 Silverado Trail	Calistoga	94515
11268	Alta Mesa Improvement Company	Crematory	695 Arastradero Road	Palo Alto	94306
11282	XKT Engineering Inc, Railroad Ave Bldg 390	Other	Mare Island, Naval Shipyard	Vallejo	94592
11308	SRM Alliance Hospital Services	Hospital / Medical	400 N McDowell Blvd	Petaluma	94954
11326	PE Berkeley, Inc	Other	Univ of Calif, Berkeley Campus	Berkeley	94720
11531	Z-Best Composting Facility	Composting	980 State Highway 25	Gilroy	95020
11596	Berkeley Farms Inc	Other	25500 Clawiter Road	Hayward	94545
11783	Zanker Road Material Processing Facility	Metal Recycling	675 Los Esteros Road	San Jose	95134
11866	Los Medanos Energy Center	Power Plant	750 E 3rd Street	Pittsburg	94565
11887	Dynergy Oakland LLC	Power Plant	50 Martin Luther King, Jr. Way	Oakland	94607
11924	California Pacific Medical Center	Hospital / Medical	Castro & Duboce Street	San Francisco	94114
11953	Daniels Chapel of the Roses	Other	1225 Sonoma Avenue	Santa Rosa	95405
11956	Equilon Enterprises LLC	Other	1801 Marina Vista	Martinez	94553
12071	Bayer US LLC	Misc. Mfg.	800 Dwight Way	Berkeley	94710
12095	Delta Energy Center	Power Plant	Arcy Lane	Pittsburg	94565
12182	City of Pacifica Calera Creek Water Recycling	Sewage Treatment	700 Coast Highway	Pacifica	94044
12183	Metcalf Energy Center	Power Plant	One Blanchard Road	Coyote	95013
12197	United Airlines, Inc	Engines and Other Sources	SFOPV, Bldg #642, Rd #9	San Francisco	94128
12417	Linear Technology Corp	Other	275 So Hillview Dr	Milpitas	95035
12455	Gilead Sciences	Other	333 Lakeside Drive	Foster City	94404
12611	Valero Refining Company	Other	3410 E 2nd Street	Benicia	94510
12626	Valero Refining Company - California	Refinery	3400 E 2nd Street	Benicia	94510
12728	Waste Management Inc	Landfill	2615 Davis Street	San Leandro	94577
12799	The Ritz Carlton San Francisco	Engines and Other Sources	600 Stockton Street	San Francisco	94108
12848	David Grant Medical Center	Hospital / Medical	101 Bodin Circle	Travis AFB	94535
13012	Romak Iron Works	Metal Melting	380 Industrial Court	Benicia	94510
13034	Universal Propulsion Company, Inc	Engines and Other Sources	3530 Branscombe Road	Fairfield	94533
13062	Sysco San Francisco, Inc	Emergency Engines	5900 Stewart Avenue	Fremont	94538
13074	NVIDIA	Engines and Other Sources	2701 San Tomas Expressway	Santa Clara	95050
13108	Vallejo Sanitation & Flood Control Dist	Emergency Engines	740 Marine World Pkwy	Vallejo	94590
13160	University of California SF	Engines and Other Sources	600 16th Street	San Francisco	94107
13335	San Jose Water Co-3Mile	Emergency Engines	1221 So Bascom Ave	San Jose	95128
13335	San Jose Water Co-3Mile	Emergency Engines	1221 So Bascom Ave	San Jose	95128
13367	San Jose International Airport	Engines and Other Sources	1701 Airport Blvd	San Jose	95112
13399	KLA Tencor	Engines and Other Sources	1 Technology Drive	Milpitas	95035

13528	Pacific Bell	Emergency Engines	95 So Almaden Avenue	San Jose	95113
13566	Recology Pacheco Pass	Landfill	Bloomfield Rd & Highway 152	Gilroy	95021
13594	Santa Clara Valley Water District - RWTP	Sewage Treatment	400 More Avenue	Los Gatos	95032
13728	East Bay Municipal Utility Dist	Engines and Other Sources	375 11th Street	Oakland	94607
13763	Novato Community Hospital	Hospital / Medical	180 Rowland Way	Novato	94945
13772	Hills Plaza Complex	Engines and Other Sources	345 Spear Street	San Francisco	94105
13958	SAP Labs LLC		3460 Hillview Ave	Palo Alto	94304
14195	State of California Department of Transportation	Engines and Other Sources	111 Grand Avenue	Oakland	94623
14240	SFPUC Water Supply and Treatment Division	Emergency Engines	609 W Orange Avenue	South San Francisco	94080
14460	Santa Clara Valley Water District-Almaden Campus	Engines and Other Sources	5750 Almaden Expy	San Jose	95118
14536	Santa Clara Valley Water District - PWTP	Other	3959 Whitman Way	San Jose	95132
14618	Kleen Blast	Other	30028 Industrial Pkwy SW	Hayward	94544
14628	Tesoro Refining & Marketing Company LLC	Refinery	150 Solano Way	Martinez	94553
14704	BNSF Railway Company	Emergency Engines	980 Hensley Street	Richmond	94801
14747	Advanced Micro Devices Inc	Emergency Engines	2030 Fortune Drive	San Jose	95131
14785	City of San Mateo	Emergency Engines	2100 Detroit Drive	San Mateo	94404
14991	Donald Von Raesfeld Power Plant	Power Plant	850 Duane Avenue	Santa Clara	95054
15169	Adobe Systems, Inc	Emergency Engines	151 Almaden Boulevard	San Jose	95113
15278	Wareham Development	Engines and Other Sources	5858 Horton Street	Emeryville	94608
15397	Santa Clara University	Engines and Other Sources	500 El Camino Real	Santa Clara	95053
15476	Saint Mary's College of California	Engines and Other Sources	1928 St. Mary's Road	Moraga	94556
15479	NeoPhotonics Corporation		2911 Zanker Road	San Jose	95134
15544	Kaiser Permanente	Other	1150 Veterans Boulevard	Redwood City	94063
15565	Western Digital Corporation	Misc. Mfg.	44100 Osgood Road	Fremont	94539
15612	Martin Building Company	Emergency Engines	6 Mint Plaza	San Francisco	94103
15868	Exchange Bank	Engines and Other Sources	440 Aviation Blvd	Santa Rosa	95403
15885	Kaiser Foundation Hospital	Other	700 Lawrence Expressway	Santa Clara	95051
16242	Sonoma-Cutrer Vineyards	Engines and Other Sources	4401 Slusser Road	Windsor	95492
16248	Comcast of California IX Inc	Engines and Other Sources	395 Mowry Blvd	Fremont	94536
16637	Parc 55 Hotel	Emergency Engines	55 Cyril Magnin Street	San Francisco	94102
16640	Mach II 180 Grand LLC	Emergency Engines	180 Grand Avenue	Oakland	94612
16795	Westfield San Francisco Center	Emergency Engines	835 Market Street	San Francisco	94103
16818	Gradetech Inc	Engines and Other Sources	1375 California Ave	Pittsburg	94565
16855	Kaiser Antioch Deer Valley	Other	4501 Sand Creek Rd	Antioch	94531
16930	San Mateo County Youth Services Center	Other	70 Loop Road	San Mateo	94402
17040	Ameresco Half Moon Bay LLC		12310 San Mateo Road	Half Moon Bay	94019
17052	BioMarin Pharmaceutical Inc	Misc. Mfg.	46 Galli Drive	Novato	94949
17090	Northern California Presbyterian Homes & Services	Engines and Other Sources	501 Portola Road	Portola Valley	94028
17114	Alameda County Public Works Agency	Emergency Engines	3455 Ettie Street	Oakland	94608
17162	City of Milpitas	Emergency Engines	1001 N McCarthy Blvd	Milpitas	95035
17315	C & H Sugar Company, Inc	Misc. Mfg.	830 Loring Ave	Crockett	94525
17347	College of San Mateo	Engines and Other Sources	1700 W Hillsdale Blvd, Bldg 7	San Mateo	94402
17372	Cal Academy of Sciences 501/C3 Non-Profit Corp	Research	55 Music Concourse Drive	San Francisco	94118
17419	Air Liquide Large Industries US LP	Misc. Mfg.	1380 San Pablo Ave	Rodeo	94572

17437	Lumileds LLC	Misc. Mfg.	370 W Trimble Road	San Jose	95131
17438	PR 3979 Freedom Circle, LLC		3979 Freedom Circle, Suite 135	Santa Clara	95054
17456	Peet's Coffee and Tea Inc	Other	2001 Harbor Bay Pkwy	Alameda	94502
17461	City of Redwood City	Engines and Other Sources	1400 Broadway	Redwood City	94063
17477	City of Redwood City		1400 Broadway	Redwood City	94063
17553	Rohm and Haas Chemicals LLC	Other	25500 Whitesell St	Hayward	94545
17667	Ameresco Keller Canyon LLC	Power Plant	901 Bailey Road	Pittsburg	94565
17870	Beaulieu Vineyard	Emergency Engines	1960 Saint Helena Hwy	Rutherford	94573
18136	Russell City Energy Co, LLC	Power Plant	3862 Depot Road	Hayward	94545
18143	Gateway Generating Station	Power Plant	3225 Wilbur Avenue	Antioch	94509
18604	Apple, Inc	Data Center	19333 Vallco Parkway	Cupertino	95014
18748	L P Enterprises, LLC	Other	2635 Cunningham Ave	San Jose	95148
19243	General Service Administration	Engines and Other Sources	345 Middlefield Road	Menlo Park	94025
19281	State of California	Engines and Other Sources	1515 Clay St, Elihu Harris Bldg	Oakland	94612
19321	Alameda Cremations	Crematory	2900 Main St, Suite 116	Alameda	94501
19432	PPF Paramount One Market Plaza, LP	Other	One Market Street	San Francisco	94105
19441	Graphic Packaging International, Inc	Misc. Mfg.	2600 De La Cruz Blvd	Santa Clara	95050
19495	Alameda County Public Works Agency	Emergency Engines	Industrial Flood, Control Pump Station	Hayward	94541
19514	Oakland Center 21	Other	2101 Webster Street	Oakland	94612
19535	Visa, Inc	Emergency Engines	900 Metro Center Blvd	Foster City	94404
19546	Santa Rosa Jet Center, LLC		2240 Airport Blvd	Santa Rosa	95403
19730	Mariposa Energy, LLC	Power Plant	4887 Bruns Road	Byron	94514
19746	FXI, Inc	Misc. Mfg.	2451 Polvorosa Street	San Leandro	94577
19749	Brannan Owners Association	Emergency Engines	229 Brannan Street	San Francisco	94107
19929	The Moscone Center	Emergency Engines	747 Howard Street	San Francisco	94103
19931	K2 Pure Solutions Nocal, LP	Chemical Plant	950 Loveridge Road	Pittsburg	94565
19997	DWFIU 1999 Harrison, LLC		1999 Harison Street	Oakland	94612
20072	Kaiser Permanente	Hospital / Medical	5840 Owens Drive	Pleasanton	94588
20077	RREEF America REIT II Corp, RRR	Emergency Engines	505 Montgomery Street	San Francisco	94111
20220	KKMI Sausalito LLC	Other	420 Harbor Drive	Sausalito	94965
20234	New Sonoma FBO, Inc	Other	6000 Flight Line Drive	Santa Rosa	95403
20312	Manheim San Francisco Bay	Other	29900 Auction Way	Hayward	94544
20428	Kaiser Hospital	Hospital / Medical	2500 Merced Street	San Leandro	94577
20432	Ameresco Vasco Road LLC		4001 N Vasco Road	Livermore	94551
20448	San Francisco Public Utilities Commission	Emergency Engines	8653 Calaveras Rd	Sunol	94586
20459	Tesla, Inc	Coating	45500 Fremont Blvd	Fremont	94538
20461	The Pyramid Center	Emergency Engines	600 Montgomery Street	San Francisco	94111
20637	Boehringer Ingelheim Fremont Inc	Other	6701 Kaiser Drive	Fremont	94555
20756	Hudson 1455 Market LLC		1455 Market Street	San Francisco	94103
20907	Brand Energy Services of Cal , Inc		3485 Pacheco Blvd	Martinez	94553
20949	Hayward FBO Services, LLC		19990 Skywest Blvd	Hayward	94541
21200	Tesoro Logistics Operations LLC		150 Solano Way	Martinez	94553
21227	Phillips 66 Company	Other	1300 Canal Boulevard	Richmond	94804
21323	State Bar of California		180 Howard Street	San Francisco	94105

21359	Phillips 66 Company - San Francisco Refinery	Refinery	1380 San Pablo Ave	Rodeo	94572
21360	Phillips 66 Carbon Plant	Misc. Mfg.	2101 Franklin Canyon Rd	Rodeo	94572
21450	Geary Market Investment Co	Emergency Engines	720 Market Street	San Francisco	94102
21454	City of Vallejo Water Division	Engines and Other Sources	202 Fleming Hill Rd	Vallejo	94589
21472	Folsom-Hawthorne LLC/Boston Properties LP		680 Folsom Street	San Francisco	94105
21478	San Francisco Federal Reserve Bank	Emergency Engines	101 Market Street	San Francisco	94105
21507	CEP Investors X11 LLC		111 Sutter Street	San Francisco	94104
21608	Pacific Place	Engines and Other Sources	1800 Washington Street	San Francisco	94109
21656	Bay Area Headquarters Authority	Emergency Engines	375 Beale Street	San Francisco	94105
21689	Biorichland LLC	Engines and Other Sources	2600 Hilltop Drive	Richmond	94806
21777	Seagate Technology LLC	Engines and Other Sources	47488 Kato Road	Fremont	94538
21802	California Resources Production Corp		9600 Ming Ave, Suite #300	Bakersfield	93311
21906	Prudential Insurance c/o Harvest Properties	Emergency Engines	100 Spear Street	San Francisco	94105
22076	City of Fremont		2000 Stevenson Blvd	Fremont	94538
22085	Dolby Laboratories, Inc	Engines and Other Sources	1275 Market St, 17th Fl	San Francisco	94103
22102	Southern Wine And Spirits	Emergency Engines	1555 Atlantic Street	Union City	94587
22209	Novartis Institutes for BioMedical Research, Inc	Engines and Other Sources	5300 Chiron Way	Emeryville	94608
22268	Nor-Cal Rock Inc		30120 Industrial Pkwy, SW	Hayward	94544
22283	Grifols Diagnostic Solutions, Inc	Other	6455 Christie Avenue	Emeryville	94608
22285	Grifols Diagnostic Solutions, Inc	Engines and Other Sources	4560 Horton Street	Emeryville	94608
22379	Preferred Freezer Services		400 Polar Way	San Leandro	94577
22566	County of Marin c/o Sares Regis	Engines and Other Sources	1600 Los Gamos Drive	San Rafael	94903
22595	Augustine Bowers LLC c/o The Irvine Company LLC		2795 Augustine Drive	Santa Clara	95054
22605	Pacific Steel Casting Company LLC	Metal Melting	1328 2nd Street	Berkeley	94710
22751	Google, Inc	Data Center	475 Ellis Street	Mountain View	94043
22789	Eco Services Operations Corp	Chemical Plant	100 Mococo Road	Martinez	94553
22951	SFDC 50 Fremont LLC	Engines and Other Sources	50 Fremont Street	San Francisco	94105
22987	Republic Services of Sonoma County, Inc	Landfill	500 Mecham Road	Petaluma	94952
23038	Baxter Healthcare Inc	Hospital / Medical	21026 Alexander Ct.	Hayward	
23181	Lumentum Operations, LLC	Other	1750 Automation Pkwy	San Jose	95131
23393	AFCO AvPORTS Management, LLC (Planetary Ventures)		158 Cody Road	Moffett Field	94035
23438	Richmond Products Terminal	Loading/Tanks	1306 Canal Street	Richmond	94804
23500	Intel Corporation	Emergency Engines	2821 Mission College Blvd	Santa Clara	95054
23612	City of San Ramon		7000 Bollinger Canyon Road	San Ramon	94583
23622	Vision Recycling Benicia		1460 Goodyear Road	Benicia	94510
23736	Chinatown Community Development Center		838 Pacific Avenue	San Francisco	94133