



Maricopa County

Air Quality Department

2011 Periodic Emissions Inventory for Ozone Precursors

for the
Maricopa County, Arizona, Eight-Hour Ozone Nonattainment Area

ADDENDUM

August 2015

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1. Background and Introduction

This addendum serves as a supplement to the 2011 Periodic Emissions Inventory for Ozone Precursors for the Maricopa County, Arizona, Eight-Hour Ozone Nonattainment Area, published in February 2014, and included as part of the *MAG 2014 Eight-Hour Ozone Plan – Submittal of Marginal Area Requirements for the Maricopa Nonattainment Area* submitted to EPA in June 2014. This document has been developed by the Maricopa County Air Quality Department (MCAQD) for three purposes:

- It adds a facility to the list of available Emission Reduction Credits (ERCs) in the Arizona Emissions Bank.
- In response to inquiries from EPA staff, it provides a “recasting” of the emissions calculations to develop an ozone season-day inventory reflecting the June–August 2011 period (vs. July–September addressed in the original Periodic Emissions Inventory [PEI] report).
- It provides further details on facility-specific emissions levels from County-permitted sources that are reflected in the original PEI report as area-source (nonpoint) emissions in Chapter 3.

Each of the above points is discussed in further detail below. Where applicable, the changes that affect (annual and/or season-day) emissions estimates for a particular source category are provided in summary tables. This Addendum concludes with a detailed table summarizing emissions for the eight-hour ozone nonattainment area (NAA), revised to reflect the two analyses described above.

Note that shaded cells in the tables below indicate emissions values that have been revised from the original PEI report. Where applicable, table and page numbers from the originally published 2011 Periodic Emissions Inventory document published in February 2014 are noted parenthetically in the table captions.

2. Availability of Additional Emission Reduction Credits (ERCs)

Since the original publication of the 2011 Periodic Emissions Inventory for Ozone Precursors in February 2014, additional emissions reduction credits (ERCs) have been added to the Arizona Emissions Bank. Penn Racquet Sports, a sports-ball manufacturing facility located within the eight-hour ozone nonattainment area, closed permanently in 2009, and its ERCs have been added to the Arizona Emissions Bank. Table A1 below lists the currently available emission reduction credits, while Table A2 provides updated annual and ozone season-day emissions estimates for the eight-hour ozone nonattainment area.

These newly available ERCs have also been incorporated into the base-year and future-year emissions inventories used by the Maricopa Association of Governments (MAG) for the modeling exercises conducted in developing the moderate-area ozone State Implementation Plan (SIP).

Table A1. Emission reduction credits as of December 31, 2011. (cf. original Table 2.5–1, p. 14)

Facility/ Current Owner	Reduction Date	Emission reduction credits (tons/yr)		
		VOC	NO _x	CO
Freescale Semiconductor, Inc.	3/1/2004	17.1	9.8	15.3
Grey K Envl Fund LP	12/11/2006	80.0		
Woodstuff Manufacturing	11/30/2007	17.6		
Penn Racquet Sports Inc.	3/06/2009	98.33	4.34	
TOTAL:		213.03	14.14	15.3

As in the original 2011 PEI report, season-day emissions from ERCs have been estimated by dividing annual totals by 365, as these are presumed equally distributed throughout the year. Table A2 provides a summary of point source emissions for the eight-hour ozone nonattainment area, including emission reduction credits.

Table A2. Revised annual and season-day point source emissions for the eight-hour ozone nonattainment area, including emission reduction credits.

Source Category	Annual (tons/yr)			Season-day emissions (lbs/day)		
	VOC	NO _x	CO	VOC	NO _x	CO
Point Sources	653.84	1,744.32	1,063.18	4,279.8	15,353.4	9,632.0
Emission Reduction Credits	213.03	14.14	15.30	1,167.3	77.5	83.8
Totals:	866.87	1,758.46	1,078.48	5,447.1	15,430.9	9,715.8

3. “Recasting” the 2011 Ozone Season-day Inventory for the Eight-Hour Ozone Nonattainment Area

3.1 Identifying an Alternative Time Period for the 2011 Ozone Season

For this exercise, MCAQD and MAG revisited the 2011 Periodic Emissions Inventory (PEI) originally prepared in 2014, to investigate if there were any significant differences in ozone season-day emissions when considering an ozone season different from the July–September period defined in the original 2011 PEI. To identify an alternative period deemed more representative of the actual ozone season, calendar year 2011 data on average and maximum Air Quality Index (AQI) values, as well as information on the incidence of ozone exceedances, were analyzed. The base data is shown below in Table A3.

Table A3. Average and maximum AQI values, and frequency of ozone exceedances in 2011, by month.

Month	Average Daily AQI Value	Maximum AQI Value	Number of Exceedances
February	42	49	0
March	48	61	0
April	63	100	0
May	70	122	2
June	85	142	9
July	69	122	2
August	70	122	4
September	60	119	1
October	44	64	0

From the above information, three-month rolling averages were calculated for each parameter, in order to identify the most representative three-month period for the ozone season. Results are shown in Table A4; maximum values in each column are shown in **bold**.

Table A4. Three-month rolling averages of monthly AQI and exceedance data for 2011.

Three-month period	Average Daily AQI Value	Maximum AQI Value	Average Number of Exceedances	Percentage of All 2011 Exceedances
February–April	51.09	70.00	0.0	0%
March–May	60.36	94.33	0.67	11%
April–June	72.52	121.33	3.67	61%
May–July	74.39	128.67	4.33	72%
June–August	74.44	128.67	5.0	83%
July–September	66.10	121.00	2.33	39%
August–October	57.94	101.67	1.67	28%

The above table indicates that the rolling three-month average for each of the parameters analyzed reaches its maximum value for the June through August time period. Thus, this time period is considered representative of the 2011 ozone season for the Phoenix area, and used in this “recasting” exercise to assess the impact of redefining the ozone season on overall emissions in the 2011 PEI.

3.2 Recalculating the 2011 Ozone Season-day Inventory

Each source category contained in the original 2011 ozone precursor emissions inventory was reviewed, and season-day emissions re-calculated where needed, depending on the methodology used to derive the original emissions estimates for that source category. The derivation of the “recast” emissions values for each source category type are described in more detail below. At the end of this section, Table A16 presents a comparison of season-day emissions for each source category, including the values contained in the original 2011 PEI report (for the July–September period), as well as the “recast” emissions reflecting the three-month period covering June through August.

3.2.1 Point and Area Sources

When analyzing season-day emissions calculations for the recasting exercise, each point and nonpoint (area) source type could be classified into one of the following categories:

- Sources whose emissions were derived from **actual activity data** for the June–August time period; thus whose emissions remain unchanged. All reported point source activity falls into this classification, as did those area source categories (e.g., bakeries, graphic arts) which had been estimated directly based on data from individual facility surveys, which were then “grown” by overall employment for that sector.
- Sources whose activity (and thus emissions) were assumed to be **evenly distributed throughout the year**, thus whose emissions remain unchanged. Examples include commercial cooking and consumer solvent use.
- Some emission categories (e.g., residential combustion of wood, LPG, and kerosene) were **assumed to have no summertime activity** (at any time between May and September), thus ozone season-day emissions for these source categories remained zero.

- Several source categories were estimated using published EPA guidance and recommended "seasonal activity factors" to derive season-day emissions from annual estimates; thus overall emissions estimates remained the same.
- One category, prescribed fires, had no reported activity in either June or September, thus the reported emissions for the ozone season (reflecting burns conducted in July and August) remained the same.

For the remaining categories, adjustments were made to recalculate the ozone-season emissions for the June–August period. For the following area source categories, monthly data was used to estimate season-day emissions in both the original PEI report, as well as this Addendum:

- Agricultural pesticides
- Gas stations Stage I: Submerged fill
- Gas stations Stage I: Bal. submerged fill
- Underground tanks: Breathing/emptying
- Truck: gasoline (tank trucks in transit)
- Accidental releases
- Wildfires

3.2.2 Nonroad Mobile Sources

3.2.2.1 Source Categories Calculated Using the NONROAD Model

Annual and monthly emissions for nonroad mobile source categories except locomotives, aircraft, airport ground support equipment (GSE) and auxiliary power units (APU), were developed using NONROAD2008a for the 2011 PEI report. For this Addendum, monthly nonroad mobile source emissions for June, July, and August 2011 were extracted from the NONROAD2008a outputs which had been generated for the original 2011 PEI. Table A5 below provides monthly emissions within the eight-hour ozone nonattainment area for each major nonroad source category calculated by the model. Season-day emissions were then calculated using activity allocation factors (as described in Section 4.1 of the original 2011 Ozone Precursor PEI report). Lawn and garden equipment total emissions were calculated by summing the residential and commercial lawn and garden equipment categories. Season-day emissions for the period of June through August 2011 are provided in Table A6.

Table A5. Monthly nonroad mobile source emissions in the eight-hour ozone nonattainment area for the period June–August, 2011 (in tons/month).

Nonroad Source Category	VOC			NOx			CO		
	June	July	August	June	July	August	June	July	August
Agricultural Equipment	2.58	2.63	2.61	21.84	21.83	21.83	20.46	20.45	20.50
Commercial Equipment	186.38	198.89	192.66	108.13	107.74	107.24	2,643.99	2,640.97	2,652.57
Construction /mining Equipment	180.11	182.14	180.91	1,211.17	1,211.08	1,210.96	1,380.06	1,377.79	1,379.73
Industrial Equipment	28.68	28.81	28.69	152.37	152.34	152.30	598.34	598.26	598.63
Lawn & Garden (Residential)	382.25	419.43	411.33	31.24	30.82	30.27	3,277.43	3,272.49	3,286.46
Lawn & Garden (Commercial)	180.11	181.47	180.97	56.86	56.55	56.13	2,932.22	2,924.99	2,934.99
Logging Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pleasure Craft	78.61	82.85	83.82	14.97	15.01	14.97	203.49	201.52	200.94
Railroad Equipment	0.17	0.18	0.17	0.72	0.72	0.72	1.44	1.44	1.44
Recreational Equipment	85.10	87.32	86.58	3.35	3.32	3.28	366.35	365.14	366.14

Table A6. Ozone season-day emissions from nonroad mobile sources in the eight-hour ozone nonattainment area for the period June–August, 2011.

Nonroad Source Category	Season-day Emissions (lbs/day)		
	VOC	NO _x	CO
Agricultural Equipment	200.6	1,679.5	1,574.6
Commercial Equipment	14,818.6	8,284.7	203,526.4
Construction and Mining Equipment	13,927.2	93,159.3	106,091.9
Industrial Equipment	2,209.9	11,718.2	46,031.6
Lawn and Garden Equipment (Total)	54,825.3	7,329.9	552,709.8
Logging Equipment	0.0	0.0	0.0
Pleasure Craft	13,207.4	2,420.5	32,628.3
Railway Maintenance Equipment	14.5	59.7	119.5
Recreational Equipment	8,855.0	339.9	37,525.9

3.2.2.2 Aircraft, Ground Support Equipment, and Auxiliary Power Units

Emissions from aircraft, ground support equipment (GSE), and auxiliary power units (APUs) for the period of June through August 2011 were calculated by applying adjustment factors to the emission estimates prepared for the original 2011 PEI report, covering the period of July through September 2011. These adjustment factors for airports have been developed by dividing the number of operations for the June–August timeframe, by the number of operations within the July–September period covered by the initial model calculations, for each of four aircraft categories (air carrier, air taxi, general aviation, and military). Monthly airport operational data were obtained from the Federal Aviation Administration (FAA) Air Traffic Activity Data System (ATADS) database for the year 2011, and from MAG 2009 airport survey data. The total operations for airports for the two periods are presented in Table A7. The season-day emissions for aircrafts, GSE, and APUs for the eight-hour ozone nonattainment area for the period of June through August 2011 developed using the adjustment factors are provided in Table A8.

Table A7. Total operations for two three-month time periods in 2011 (June–August, and July–September) for airports within the eight-hour ozone nonattainment area.

Airport	Count of Total Operations Over a Three-Month Period, by Aircraft Category							
	Air Carrier		Air Taxi		General Aviation		Military	
	Jun-Aug	Jul-Sep	Jun-Aug	Jul-Sep	Jun-Aug	Jul-Sep	Jun-Aug	Jul-Sep
Buckeye Municipal	0	0	0	0	12,421	12,008	0	0
Chandler Municipal	0	6	532	553	36,210	37,001	389	388
Falcon Field	0	3	696	656	48,426	47,073	547	629
Gila Bend Municipal	0	0	0	0	833	806	0	0
Glendale Municipal	0	0	240	220	19,613	20,904	14	8
Luke Air Force Base	0	0	0	0	0	0	21,082	20,794
Phoenix Deer Valley	0	0	828	796	77,787	84,991	24	61
Phoenix Goodyear	29	29	83	65	33,302	33,437	1,611	1,944
Phoenix Sky Harbor	95,534	92,717	16,326	16,484	4,398	4,536	585	505
Phoenix-Mesa Gateway	2,082	1,974	2,317	2,196	31,047	31,686	1,198	1,326
Pleasant Valley	0	0	0	0	1,503	1,503	0	0
Scottsdale	0	0	2,459	2,584	27,027	28,111	107	139
Sky Ranch at Carefree	0	0	0	0	448	432	0	0
Stellar Airpark	0	0	0	0	9,153	8,849	0	0

Table A8. Ozone season-day emissions from aircraft, ground support equipment, and auxiliary power units in the eight-hour ozone nonattainment area for the period June–August, 2011.

Nonroad Source Category	Ozone Season-day Emissions (lbs/day)		
	VOC	NO _x	CO
Aircraft	8,355.4	12,789.2	63,737.5
GSE & APU	590.0	2,155.7	17,236.5

3.2.3 Onroad Mobile Sources

MOVES2010b was used to generate monthly onroad mobile source emissions for vehicle classes, facility types, weekdays and weekend for the 2011 Periodic Emissions Inventory (PEI) for ozone precursors. Monthly onroad mobile source emissions in the eight-hour ozone nonattainment area for June through August were obtained from the MOVES2010b output database developed for the original 2011 PEI; results are shown in Table A9 below. To calculate the average daily emissions for the period, the three-month total onroad emissions were divided by 92 (the total number of days in the three-month period) as shown in Table A10.

Table A9. Monthly emissions from onroad mobile sources in the eight-hour ozone nonattainment area for the period June–August, 2011.

	Onroad Mobile Source Emissions (lbs/month)		
	VOC	NO _x	CO
June	4,283,659.6	10,160,425.4	38,461,716.3
July	4,528,226.8	9,006,439.8	39,909,804.7
August	4,739,641.7	9,267,486.0	42,238,005.8
Total	13,551,528.1	28,434,351.2	120,609,526.8

Table A10. Average season-day emissions from onroad mobile sources in the eight-hour ozone nonattainment area for the period June–August, 2011.

Source Category	Average Season-day Emissions (lbs/day)		
	VOC	NO _x	CO
Onroad Mobile Sources	147,299.2	309,069.0	1,310,973.1

3.2.4 Biogenic Sources

Daily mean biogenic emissions for June, July, and August 2011 were obtained from Table 6.4–1 in the 2011 ozone precursor PEI report (and reproduced below in Table A11). The three-month daily means were then averaged to derive season-day biogenic emissions values, as shown in Table A12.

Table A11. Daily mean emissions from biogenic sources in the eight-hour ozone nonattainment area for the period June–August, 2011.

	Daily Mean Biogenic Emissions (lbs/day)		
	VOC	NO _x	CO
June	690,104.5	5,089.1	61,726.7
July	693,725.6	6,294.2	66,100.2
August	720,330.5	7,529.4	71,775.8

Table A12. Average season-day emissions from biogenic sources in the eight-hour ozone nonattainment area for the period June–August, 2011.

Source Category	Average Season-day Emissions (lbs/day)		
	VOC	NO _x	CO
Biogenic Sources	701,386.9	6,304.2	66,534.2

3.3 Summary of the “Recasting” Exercise Using a June–August Ozone Season

The tables below compare the original ozone season-day emissions inventory for the eight-hour ozone nonattainment area, with the revised season-day totals that incorporate the revised season-day emissions calculations described in Section 3.2 above. Table A13 compares overall season-day emissions for the eight-hour nonattainment area, broken out by major source category.

Table A13. Comparison of ozone season-day emissions in the eight-hour ozone nonattainment area from the original 2011 PEI report vs. the “recast” inventory, by major source category.

Source Category	Ozone Season-day Emissions (lbs/day)					
	As In Original PEI Report (July–September ozone season)			“Recast” Inventory (June–August ozone season)		
	VOC	NOx	CO	VOC	NOx	CO
Point Sources	4,908	15,407	9,716	4,908	15,407	9,715
Nonpoint (Area) Sources	227,857	31,820	292,321	228,322	32,043	302,710
Nonroad Mobile Sources	111,797	141,444	1,025,618	117,279	144,874	1,061,973
Onroad Mobile Sources	148,186	301,824	1,321,680	147,299	309,069	1,310,973
Biogenic Sources	624,395	6,232	62,584	701,387	6,304	66,534
Total, all source categories	1,117,143	496,727	2,711,919	1,199,195	507,698	2,751,955

The two tables below summarize the changes in emissions that result from redefining the ozone season as the June–August time period. Table A14 presents the absolute emission changes (both increases and decreases), while Table A15 presents these changes in percentage terms. Both tables indicate that the net change in anthropogenic emissions that results from a revised definition of an “ozone season” to June–August is insignificant (i.e., slightly less than 1% of the overall inventory). Finally, Table A16 presents a detailed, line-item comparison of the season-day inventory presented in the original PEI report, vs the recast version incorporating the revised emissions calculated described above.

Table A14. Absolute change in ozone season-day emissions in the eight-hour ozone nonattainment area between the original 2011 PEI report (reflecting a July–September ozone season) and the “recast” inventory (reflecting June–August), by major source category.

Source Category	Change in Season-day Emissions (lbs/day)		
	VOC	NOx	CO
Point Sources	0	0	0
Nonpoint (Area) Sources	+465	+223	+10,389
Nonroad Mobile Sources	+5,482	+3,431	+36,404
Onroad Mobile Sources	–887	+7,245	–10,707
Biogenic Sources	+76,992	+73	+3,950
Net change, all source categories	+82,052	+10,971	+40,037
Net change, anthropogenic sources only (excluding wildfires and biogenic sources)	+4,571	+10,676	+25,697

Table A15. Percentage change in ozone season-day emissions in the eight-hour ozone nonattainment area between the original 2011 PEI report (reflecting a July–September ozone season) and the “recast” inventory (reflecting June–August), by major source category.

Source Category	Change in Season-day Emissions (%)		
	VOC	NOx	CO
Point Sources	0.00%	0.00%	0.00%
Nonpoint (Area) Sources	+0.20%	+0.70%	+3.55%
Nonroad Mobile Sources	+4.90%	+2.43%	+3.55%
Onroad Mobile Sources	–0.60%	+2.40%	–0.81%
Biogenic Sources	+12.33%	+1.16%	+6.31%
Net change, all source categories	+7.34%	+2.21%	+1.48%
Net change, anthropogenic sources only (excluding wildfires and biogenic sources)	+0.41%	+2.15%	+0.95%

Table A16. Ozone season-day emissions from all source categories in the eight-hour ozone nonattainment area, comparing the original 2011 PEI report (reflecting a July–September ozone season) and the “recast” inventory (reflecting June–August), by major source category. Shaded cells indicate revised emission values.

Source Category	Original PEI (July–Sept., in lbs/day)			“Recast” ozone season (June–August, in lbs/day)		
	VOC	NO _x	CO	VOC	NO _x	CO
POINT SOURCES¹	4,279.8	15,353.4	9,632.0	4,279.8	15,353.4	9,632.0
Emission Reduction Credits ² (unchanged)	628.5	53.7	83.8	628.5	53.7	83.8
Total, All Point Sources:	4,908.3	15,407.1	9,715.8	4,908.3	15,407.1	9,715.8
AREA SOURCES:						
<i>Fuel combustion:</i>						
Industrial distillate oil: Boilers ²	3.9	388.5	97.1	3.9	388.5	97.1
Industrial distillate oil: Engines ²	0.0	11,733.0	2,525.3	0.0	11,733.0	2,525.3
Industrial natural gas ¹	216.9	4,285.3	2,669.3	216.9	4,285.3	2,669.3
Comm./inst. distillate oil: Boilers ²	0.0	0.8	0.2	0.0	0.8	0.2
Comm./inst. distillate oil: Engines ²	0.0	23.7	5.1	0.0	23.7	5.1
Comm./inst. natural gas ¹	251.7	4,992.0	3,061.7	251.7	4,992.0	3,061.7
Residential distillate oil ³	0	0	0	0	0	0
Residential natural gas ¹	120.5	2,060.1	876.7	120.5	2,060.1	876.7
Residential LPG ³	0	0	0	0	0	0
Residential wood combustion ³	0	0	0	0	0	0
Residential kerosene ³	0	0	0	0	0	0
All Fuel Combustion:	593.0	23,483.5	9,235.4	593.0	23,483.5	9,235.4
<i>Industrial processes:</i>						
Chemical manufacturing ¹	596.5			596.5		
Commercial cooking ²	829.8		2,181.7	829.8		2,181.7
Bakeries ¹	545.4			545.4		
Secondary metal production ¹	306.4	107.9	697.4	306.4	107.9	697.4
Rubber/plastic product manufacturing ¹	14,110.1			14,110.1		
Electrical equipment manufacturing ¹	746.2	135.8	16.4	746.2	135.8	16.4
Industrial processes, NEC ¹	318.0	1,245.8	525.2	318.0	1,245.8	525.2
All Industrial Processes:	17,452.4	1,489.5	3,420.8	17,452.4	1,489.5	3,420.8
<i>Solvent use:</i>						
Architectural coatings ⁴	30,973.1			30,973.1		
Auto refinishing ²	10,211.8			10,211.8		
Traffic markings ⁴	1,737.5			1,737.5		
Factory finished wood ¹	1,390.7			1,390.7		
Wood furniture ¹	3,419.9			3,419.9		
Aircraft surface coating ¹	473.1			473.1		
Miscellaneous surface coating ¹	2,440.0			2,440.0		
Degreasing ¹	1,445.1			1,445.1		
Dry cleaning ²	180.1			180.1		
Graphics arts ¹	2,216.1			2,216.1		
Miscellaneous industrial solvent use ¹	5,104.6			5,104.6		
Consumer and commercial products ²	96,468.5			96,468.5		
Cutback asphalt ²	4,309.9			4,309.9		
Emulsified asphalt ²	4,465.8			4,465.8		
Roofing asphalt ²	23.7			23.7		
Agricultural pesticides	1,697.5			1,697.3		
All Solvent Use:	166,557.4			166,557.2		

¹ = No change; season-day emissions are based on June–August activity data reported by sources.

² = No change; activity is assumed evenly distributed throughout the year.

³ = No change; no activity assumed to occur between May and September.

⁴ = No change; season-day emissions were estimated using EPA guidance and seasonal activity factor.

⁵ = No change; no activity reported in June or September.

⁶ = No change; activity is accounted for as part of mobile source emission calculations.

Table A16 (continued). Ozone season-day emissions from all source categories in the eight-hour ozone non-attainment area, comparing the original 2011 PEI report (reflecting a July–September ozone season) and the “recast” inventory (reflecting June–August), by major source category. Shaded cells indicate revised emission values.

Source Category	Original PEI (July–Sept., in lbs/day)			“Recast” ozone season (June–August, in lbs/day)		
	VOC	NOx	CO	VOC	NOx	CO
Storage/transport:						
Residential portable gas cans ²	16,311.4			16,311.4		
Commercial portable gas cans ²	3,136.7			3,136.7		
Bulk plants ¹	659.3			659.3		
Gas stations Stage I: Submerged fill	528.7			526.9		
Gas stations Stage I: Bal. submerged fill	1,426.8			1,421.9		
Gas stations Stage II ⁶	0			0		
Underground tanks: Breathing/emptying	4,138.6			4,124.4		
Airports: aviation gasoline Stage I ²	1,887.2			1,887.2		
Airports: aviation gasoline Stage II ²	97.9			97.9		
Truck: gasoline (tank trucks in transit)	315.8			314.7		
Pipeline gasoline ²	94.5			94.5		
Volatile organic liquids storage/transport ¹	169.3			169.3		
All Storage/Transport:	28,766.2			28,744.2		
Waste treatment/disposal:						
On-site incineration ¹	1.1	21.4	5.3	1.1	21.4	5.3
Open burning: Land clearing debris ²	9.1	4.1	86.4	9.1	4.1	86.4
Landfills ¹	200.7	167.4	596.4	200.7	167.4	596.4
Publicly owned treatment works ⁴	583.7			583.7		
Leaking underground storage tanks ²	32.3			32.3		
Other waste ¹	10.9	122.8	431.4	10.9	122.8	431.4
All Waste Treatment/Disposal:	837.8	315.6	1,119.6	837.8	315.6	1,119.6
Misc. area sources:						
Agricultural field burning ²	470.2	209.0	4,440.7	470.2	209.0	4,440.7
Structure fires ⁴	73.3	9.3	399.7	73.3	9.3	399.7
Aircraft engine testing ¹	26.1	259.3	91.2	26.1	259.3	91.2
Vehicle fires ²	51.4	6.4	200.8	51.4	6.4	200.8
Crematories ¹	50.9	88.1	17.2	50.9	88.1	17.2
Accidental releases	2.1	0.0	0.0	0.6	0.0	0.0
Hospitals ¹	52.9			52.9		
Wildfires	12,794.0	5,832.6	271,872.2	13,282.9	6,055.4	282,261.6
Prescribed fires ⁵	129.2	127.1	1,523.2	129.2	127.1	1,523.2
All Misc. Area Sources:	13,650	6,532	278,545	14,137.4	6,754.7	288,934.4
ALL AREA SOURCES:	227,856.8	31,820.5	292,320.7	228,322.0	32,043.4	302,710.1
NONROAD MOBILE SOURCES:						
Agricultural equipment	192.5	1,615.1	1,510.9	200.6	1,679.5	1,574.6
Airport GSE & APUs	584.5	2,128.9	17,071.7	590.0	2,155.5	17,236.7
Commercial equipment	14,474.7	8,299.0	202,531.2	14,818.6	8,284.7	203,526.4
Construction & mining equipment	13,534.5	90,774.0	103,125.0	13,927.2	93,159.3	106,091.9
Industrial equipment	2,203.1	11,712.9	45,940.4	2,209.9	11,718.2	46,031.6
Lawn and garden equipment	52,584.9	7,078.4	529,218.9	54,825.3	7,329.9	552,709.8
Pleasure craft	11,527.0	1,996.8	26,738.3	13,207.4	2,420.5	32,628.3
Railway maintenance equipment	14.4	59.7	119.1	14.5	59.7	119.5
Recreational equipment	8,020.9	306.0	33,528.7	8,855.0	339.9	37,525.9
Aircraft	8,385.8	12,535.3	64,993.6	8,355.4	12,789.2	63,737.5
Locomotives ²	274.8	4,937.7	839.9	274.8	4,937.7	839.9
ALL NONROAD MOBILE SOURCES:	111,797.1	141,443.8	1,025,617.7	117,278.7	144,874.4	1,062,022.0
ONROAD MOBILE SOURCES:	148,186.2	301,823.7	1,321,680.2	147,299.2	309,069.0	1,310,973.1
BIOGENIC SOURCES:	624,395.0	6,231.7	62,584.2	701,386.9	6,304.2	66,534.2
TOTAL, ALL SOURCE CATEGORIES:	1,117,143.4	496,726.7	2,711,918.6	1,199,195.0	507,698.0	2,751,955.2

4. Emissions from Facilities Treated as Area Sources in the 2011 Periodic Emissions Inventory

Table A17 below lists those sources whose 2011 emissions were included in the area source categories of the 2011 Periodic Emissions Inventory (PEI) report for Ozone Precursors, originally published in February 2014.

Table A17. 2011 emissions (in tons/yr) from permitted facilities whose emissions are reflected in area source categories.

ID	Business Name	Address	City	VOC	NOx	CO
1074	23RD AVE WASTEWATER TREATMENT PLANT	2470 S 22ND AVE	PHOENIX	0.24	2.62	25.73
1303	ABLE ENGINEERING & COMPONENT SERVICES	2920 E CHAMBERS ST	PHOENIX	1.29	0.07	0.06
1387	ABLE STEEL FABRICATORS	4150 E QUARTZ CIR	MESA	2.06		
103646	ABSS MANUFACTURING CO INC	3935 W ADAMS ST	PHOENIX	1.21		
73117	ACE ASPHALT OF ARIZONA INC	3030 S 7TH ST	PHOENIX	0.75		
4005	AEROTEC INTERNATIONAL INC	3007 E CHAMBERS ST	PHOENIX	0.27	0.20	0.01
969	AF LORTS MANUFACTURING COMPANY INC	15836 W EDDIE ALBERT WAY	GOODYEAR	16.48		
74939	AFFORDABLE POWDER COATING	2111 W FILLMORE ST	PHOENIX	0.01	0.09	0.08
34139	ALL WOOD TREASURES CO	2063 E CEDAR ST	TEMPE	7.80		
35541	ALLIED TUBE AND CONDUIT	2525 N 27TH AVE	PHOENIX	14.52	0.08	0.07
4369	AM FORM U-HAUL	4650 W PASADENA AVE	GLENDALE	0.01		
4397	AMBER STEEL FABRICATION, INC	11331 E GERMANN RD	CHANDLER	13.17		
128418	AMERICAN AEROSPACE TECHNICAL CASTINGS	2950 W CATALINA DR	PHOENIX	0.08	0.21	0.18
1412	AMERICAN AIRLINES INC	3400 E SKY HARBOR BLVD	PHOENIX	0.05	0.65	0.14
1243	AMERICAN FIBERGLASS	2533 W CYPRESS ST	PHOENIX	2.35		
131366	AMERICAN METALS COMPANY, INC	740 W BROADWAY RD	MESA	0.13	1.64	0.35
1195	AMERICAN MONUMENT CO	2337 W VAN BUREN ST	PHOENIX	0.09		
54414	AMERICAN SAND & ROCK	PORTABLE		0.15	1.83	0.39
42432	AMERIPRIDE LINEN & APPAREL SERVICE	6025 W VAN BUREN ST	PHOENIX	0.06	1.11	0.94
199	AMERON INTL-WATER TRANSMISSION GROUP	2325 S 7TH ST	PHOENIX	1.73	0.19	0.10
129545	AMES DIVERSIFIED SERVICES	3015 W CLARENDON AVE	PHOENIX	0.03	1.39	0.08
78183	AMKOR TECHNOLOGY INC	1900 S PRICE RD	CHANDLER	0.02	0.27	0.08
130799	ANASAZI DOOR	5650 S 67TH AVE	LAVEEN	0.16		
31637	ANDERSON CLAYTON CORP	25500 W SOUTHERN AVE	BUCKEYE	0.01	0.39	0.07
79726	ANGELICA TEXTILE SERVICES	4410 W MOHAVE ST	PHOENIX	0.16	2.80	1.41
41	ANIMAL CREMATION SERVICES	5646 W BETHANY HOME RD	GLENDALE	0.02	1.14	0.06
92785	APEX BLOCK	1901 W FILLMORE ST	PHOENIX	0.01		
83379	APS BIOGROUP	601 S 54TH AVE	PHOENIX	0.02	0.37	0.31
78943	AQC PAINTING	6947 W SOUTHERN AVE	LAVEEN	0.32		
84	ARIZONA BRAKE & CLUTCH SUPPLY INC	2211 N BLACK CANYON HWY	PHOENIX	1.05	0.01	0.01
35372	ARIZONA CUSTOM CABINETS INC	8729 N 78TH AVE	PEORIA	2.88		
3938	ARIZONA GALVANIZING INC	15775 W ELWOOD ST	GOODYEAR	0.14	2.56	2.15
130470	ARIZONA LANDFILL LLC	2750 S 11TH AVE	PHOENIX	0.65	13.51	2.07
131021	ARIZONA NUTRITIONAL SUPPLEMENTS LLC	210 S BECK AVE	CHANDLER	12.07		
69409	ARIZONA POLYMER FLOORING INC	7731 N 68TH AVE	GLENDALE	5.96		
4364	ARIZONA STATE UNIVERSITY	1551 S RURAL RD	TEMPE	2.29	8.99	4.09
128851	ARMOR DESIGN LLC	2500 N 24TH ST	PHOENIX	0.02	0.00	0.00
36340	ARMORWORKS LLC	305 N 54TH ST	CHANDLER	2.17		
30112	ASM AMERICA INC	3440 E UNIVERSITY DR	PHOENIX	0.13	0.15	0.03

Table A17 (continued). 2011 emissions (in tons/yr) from permitted facilities whose emissions are reflected in area source categories.

ID	Business Name	Address	City	VOC	NOx	CO
36898	ASPC-LEWIS	26700 S HWY 85	BUCKEYE	2.37	14.29	10.31
4109	ASSOCIATED CONSTRUCTION ENTERPRISES INC	3645 N 40TH AVE	PHOENIX	0.30		
4328	ASU MACROTECHNOLOGY WORKS	7700 S RIVER PKWY	TEMPE	1.06	2.79	1.12
1502	ATLAS ROOFING CORPORATION	40 S 45TH AVE	PHOENIX	6.07	0.49	2.02
2656	AVIATION DEPT - PHOENIX SKY HARBOR	3400 E SKY HARBOR BLVD	PHOENIX	0.50	3.48	1.01
50422	BAE SYSTEMS AEROSPACE AND DEFENSE GROUP	7822 S 46TH ST	PHOENIX	9.24	0.83	0.69
1449	BAKER COMMODITIES	3602 W ELWOOD ST	PHOENIX	13.87	2.47	0.00
31585	BANK OF AMERICA	2500 W FRYE RD	CHANDLER	0.11	6.02	0.91
781	BANNER GOOD SAMARITAN MEDICAL CENTER	1111 E MCDOWELL RD	PHOENIX	0.56	8.23	5.29
29946	BANNER THUNDERBIRD MEDICAL CENTER	5555 W THUNDERBIRD RD	GLENDALE	1.36	6.57	1.75
126319	BELLA BEAMS & ARCHITECTURAL PRODUCTS INC	825 N 73RD AVE	PHOENIX	0.39		
65354	BERGMANN GROUP	3730 E SOUTHERN AVE	PHOENIX	0.00	0.06	0.05
961	BIG SURF WATERPARK	1500 N MCCLINTOCK DR	TEMPE	0.32	7.83	1.10
74058	BILTMORE SHUTTERS INC	1138 W WATKINS ST	PHOENIX	5.22		
1192	BINGHAM OF ARIZONA	2327 E JONES AVE	PHOENIX	0.14		
128814	BIOTECH RESEARCH LABS INC	3809 E WATKINS ST	PHOENIX	1.08	1.53	1.28
115733	BOLT'S METALLIZING, INC	222 S 37TH ST	PHOENIX	0.86		
34872	BONDED LOGIC	24053 S ARIZONA AVE	CHANDLER	0.00	2.12	0.35
226	BORAL ROOFING LLC	1832 S 51ST AVE	PHOENIX	2.24	0.27	0.23
688	BREWER COTE OF ARIZONA	5226 W MISSOURI AVE	GLENDALE	0.00	0.02	0.00
59	BROWN & BROWN CHEVROLET	145 E MAIN ST	MESA	3.84	0.29	0.24
3528	BROWN EVANS DIST - B/P #1	306 S COUNTRY CLUB DR	MESA	6.71		
458	BRYANT INDUSTRIES INC	788 W ILLINI ST	PHOENIX	3.77		
130047	BUESING CORPORATION	11520 E GERMANN RD	CHANDLER	0.24	2.99	0.64
217	BUILDING PRODUCTS CO	4850 W BUCKEYE RD	PHOENIX	1.02	1.40	4.81
2854	BUNGER STEEL INC	8112 W BUCKEYE RD	PHOENIX	0.60		
56105	BURDETTE CABINET CO INC	3941 N HIGLEY RD	MESA	8.91		
1218	BUTTERFIELD STATION FACILITY	40404 S 99TH AVE	MOBILE	5.82	17.73	23.58
46123	CABINETS BY SUZI INC	2801 N 37TH AVE	PHOENIX	1.16		
131634	CAFE VALLEY, INC	7000 W BUCKEYE RD	PHOENIX	5.81	2.03	1.71
3307	CALJET	5119 W MONROE ST	PHOENIX	32.44		
3442	CALJET	125 N 53RD AVE	PHOENIX	30.15	0.01	0.08
108199	CALJET OF AMERICA LLC	57 N 57TH AVE	PHOENIX	8.82		
120006	CALPORTLAND	PORTABLE #1		0.00	0.04	0.03
129582	CALPORTLAND	23742 N CENTRAL AVE	PHOENIX	0.00	0.06	0.06
131966	CALPORTLAND	4830 S 43RD AVE	PHOENIX	0.01	0.25	0.21
109360	CALPORTLAND COMPANY	7505 S 143RD AVE	GOODYEAR	0.00	0.04	0.03
3296	CALVERT OIL CO	214 E ARIZONA EASTERN AVE	BUCKEYE	10.33		
291	CAPITAL LUMBER COMPANY	11 N 45TH AVE	PHOENIX	0.38		
177	CAPITOL ENGINEERING CO	724 E SOUTHERN PACIFIC DR	PHOENIX	0.31		
284	CARL T HAYDEN VA MEDICAL CENTER	650 E INDIAN SCHOOL RD	PHOENIX	0.83	4.58	2.09
776	CASE SANDBLASTING INC	1018 S 27TH AVE	PHOENIX	1.00		
1317	CAVCO INDUSTRIES INC	2602 S 35TH AVE	PHOENIX	0.00		
1318	CAVCO INDUSTRIES INC	1366 S LITCHFIELD RD	GOODYEAR	9.91		
1316	CAVCO INDUSTRIES LLC/DURANGO PLANT	2502 W DURANGO ST	PHOENIX	3.19		
260	CEMEX - 19TH AVE PLANT	3640 S 19TH AVE	PHOENIX	2.50	9.56	29.27
98591	CEMEX - 7TH STREET PLANT	PORTABLE #4	PHOENIX	0.00	0.07	0.02
98492	CEMEX - BUCKEYE PLANT	22625 W BELOAT RD	BUCKEYE	0.00	0.01	0.00
63	CEMEX - EL MIRAGE PLANT	8635 N EL MIRAGE RD	EL MIRAGE	0.00	0.04	0.01
129625	CEMEX - TABLE MESA SITE	TABLE MESA RD	PHOENIX	0.00	0.03	0.01

Table A17 (continued). 2011 emissions (in tons/yr) from permitted facilities whose emissions are reflected in area source categories.

ID	Business Name	Address	City	VOC	NOx	CO
1266	CEMEX - WEST PLANT	11701 W INDIAN SCHOOL RD	PHOENIX	0.00	0.00	
4009	CEMEX ENTERPRISES, LLC	327 S 27TH AVE	PHOENIX	0.01	0.09	0.08
16	CEM-TEC CORPORATION	3745 S 7TH AVE	PHOENIX	1.17	0.10	0.08
27947	CENTRAL ARIZONA WATER CONSERVATION DIST	23636 N 7TH ST	PHOENIX	0.99	0.64	0.14
1310	CENTURY GRAPHICS LLC	2960 GRAND AVE	PHOENIX	8.44	0.33	0.28
823	CHEMRESEARCH CO INC	1130 W HILTON AVE	PHOENIX	4.57	0.36	0.31
3976	CHOLLA CUSTOM CABINETS INC	1727 E DEER VALLEY DR	PHOENIX	2.04	0.01	0.00
261	CHROMALLOY ARIZONA	5161 W POLK ST	PHOENIX	0.04	0.68	0.57
127623	CINTAS CORPORATION	2425 W NEVADA ST	CHANDLER	1.85	0.71	0.59
61573	CIRCLE H SAND & ROCK	6400 S EL MIRAGE RD	TOLLESON	0.19	2.37	0.51
3441	CIRCLE K TERMINAL LLC	5333 W VAN BUREN ST	PHOENIX	36.16		
35819	CITY OF CHANDLER LANDFILL	3850 S MCQUEEN RD	CHANDLER	0.15	1.53	0.07
3403	CITY OF PHOENIX 19TH AVE LANDFILL	1701 W LOWER BUCKEYE RD	PHOENIX	0.04	0.70	0.30
29919	CITY OF PHOENIX 27TH AVE LANDFILL	2800 S 27TH AVE	PHOENIX	0.12	1.50	2.61
43818	CLASSIC PARTY RENTALS	3103 E BROADWAY RD	PHOENIX	0.89		
1075	CITY OF PHOENIX 91ST AVE WWTP	5615 S 91ST AVE	TOLLESON	2.97	19.08	9.16
49636	COFFMAN SPECIALTIES INC	PORTABLE 1		0.33	4.10	0.88
926	COMPOSITES ONE LLC	2701 W VIRGINIA AVE	PHOENIX	0.08		
113723	CONTRACTORS LANDFILL & RECYCLING	2425 N CENTER ST	MESA	0.14	1.72	0.37
130397	COOLING TOWER PRODUCTS	415 E GRANT ST	PHOENIX	0.56		
34473	COPLIN MFG INC	7505 W WASHINGTON ST	TOLLESON	2.91		
1054	COPPERSTATE CABINET CO INC	1932 W NORTH LN	PHOENIX	6.08		
31570	COPPERSTATE RUBBER OF ARIZONA	750 S 59TH AVE	PHOENIX	8.17	0.35	0.30
399	CORES LAB STRUCTURES (ARIZ) INC	5026 S 43RD AVE	PHOENIX	2.30		
225	CORNING GILBERT INC	5310 W CAMELBACK RD	GLENDALE	0.72		
227	CORROSION ENGINEERING INC	145 S NINA CIR	MESA	14.98	0.43	0.36
1198	COURIER GRAPHICS CORP	2621 S 37TH ST	PHOENIX	8.80	0.30	0.25
289	COURTHOUSE AG HOLDINGS LLC	51040 W VALLEY RD	AGUILA	1.74	0.01	0.01
65	CRAFCO INC	6975 W CRAFCO WAY	CHANDLER	1.74	0.32	0.23
4368	CRAFTSMEN IN WOOD MFG	5441 W HADLEY ST	PHOENIX	4.81	0.04	0.03
1407	CRANE CO. SIGNAL TECHNOLOGY	340 N ROOSEVELT AVE	CHANDLER	0.37	0.24	0.20
100059	CRM OF AMERICA (NEW AIR)	11400 E PECOS RD	MESA	0.19	0.18	0.15
131179	CSE OPERATING I, LLC	29115 W BROADWAY RD	BUCKEYE	0.00	0.44	0.05
130790	CUSTOM FAB INC	3065 S 43RD AVE	PHOENIX	3.74	0.25	0.21
131444	CUSTOM LANDSCAPE MATERIALS "BELMONT"		WICKENBURG	0.08	1.00	0.21
131392	CUSTOM LANDSCAPE MATERIALS "BIG HORN"	AGUILA RD MILE POST 12	AGUILA	0.18	2.20	0.47
87	DECA CREMATION SERVICES INC	2237 S 15TH ST	PHOENIX	0.01	0.76	0.04
45027	DEER VALLEY TRANSFER STATION	2120 W ADOBE DR	PHOENIX	0.01	0.06	0.01
1342	DEL RIO LANDFILL	1150 E ELWOOD ST	PHOENIX	0.23	0.10	0.02
696	DESERT FIRE INDUSTRIES INC	720 W ILLINI ST	PHOENIX	1.02	1.29	1.08
47179	DESERT MILLWORK INC	1702 W ROOSEVELT ST	PHOENIX	0.94		
50725	DESERT POWDER COATING	4409 S 35TH AVE	PHOENIX	5.42	0.27	0.23
51073	DIGITAL REALTY TRUST CHANDLER, LLC	2121 S PRICE RD	CHANDLER	0.54	6.75	4.92
440	DI-MATRIX PRECISION MANUFACTURING	5225 S 31ST PL	PHOENIX	23.67		
130195	DIRT 101 OPERATIONS LLC	11748 W GLENDALE AVE	GLENDALE	0.12	1.45	0.31
130	DOLPHIN INC	740 S 59TH AVE	PHOENIX	0.87	0.81	0.68
127094	DOUBLETREE PAPER MILL LLC	31201 W THAYER RD	GILA BEND	5.76	4.66	12.62
299	DPC ENTERPRISES INC GP	4909 W PASADENA AVE	GLENDALE	1.60		
971	DUCOMMUN LABARGE TECHNOLOGIES INC	1601 E BROADWAY RD	PHOENIX	1.51	0.12	0.10
51062	DURANGO CORRECTIONAL FACILITY	3225 W DURANGO ST	PHOENIX	0.14	2.12	1.19

Table A17 (continued). 2011 emissions (in tons/yr) from permitted facilities whose emissions are reflected in area source categories.

ID	Business Name	Address	City	VOC	NOx	CO
36595	D-VELCO AVIATION SERVICES	300 S 23RD ST	PHOENIX	0.37	0.06	0.05
48771	EAGLE ROOFING PRODUCTS	4602 W ELWOOD ST	PHOENIX	1.01	0.22	0.19
35018	EARL'S FIBERGLASS INC	128 W MARICOPA FWY	PHOENIX	6.56		
3305	EARTHGRAINS BAKING COMPANIES INC	738 W VAN BUREN ST	PHOENIX	14.74	2.11	1.77
1286	EASTERN PRODUCTS FOUNDRY	2810 E ILLINI ST	PHOENIX	0.04	0.05	0.04
26	EMPIRE MACHINERY CO	1725 S COUNTRY CLUB DR	MESA	8.90	32.42	19.53
62367	EMPIRE POWER SYSTEMS	840 N 43RD AVE	PHOENIX	0.11		
130260	ENTRUSTED PET LLC	2237 S 15TH ST	PHOENIX	0.00	0.17	0.01
87202	ENVIRONMENTAL MANAGEMENT SYSTEMS INC	2132 S 5TH AVE	PHOENIX	0.00	0.02	0.00
55952	ERGON ASPHALT PRODUCTS INC	6940 W CHANDLER BLVD	CHANDLER	0.11	0.27	0.22
114747	ERICKSON FRAMING AZ LLC	250 N BECK AVE	CHANDLER	0.07		
1505	EXECUTIVE DOOR COMPANY	3939 W CLARENDON AVE	PHOENIX	0.36		
1488	FARMER'S GIN INC	8400 S TURNER RD	BUCKEYE	0.03	0.89	0.15
59426	FEDERAL EXPRESS-PHX	3002 E OLD TOWER RD	PHOENIX	0.48	1.01	0.22
224	FERTIZONA	17102 W OLIVE AVE	WADDELL	0.28		
925	FERTIZONA BUCKEYE LLC	26705 W BASELINE RD	BUCKEYE	0.69		
132090	FINE WOODS MFG INC	4817 S 35TH ST	PHOENIX	0.39		
131222	FINECRAFT CUSTOM WOODWORKS LLC	5230 W LUKE AVE	GLENDALE	2.34		
107758	FIREBIRD FIBERGLASS PRODUCTS INC	6010 N 53RD DR	GLENDALE	6.47		
128991	FISHER SAND & GRAVEL	PORTABLE #3		0.86	8.65	7.98
63471	FISHER SAND & GRAVEL CO	PORTABLE #1		0.03	0.36	0.08
85509	FISHER SAND & GRAVEL COMPANY	PORTABLE #2		0.08	0.97	0.21
1087	FLEX FOAM DIVISION	617 N 21ST AVE	PHOENIX	2.92	0.23	0.20
27728	FLIPCHIP INTERNATIONAL LLC	3701 E UNIVERSITY DR	PHOENIX	21.28	0.50	0.42
1375	FOREST DESIGNS	3230 E ROESER RD	PHOENIX	4.42		
881	FREESCALE SEMICONDUCTOR INC	1300 N ALMA SCHOOL RD	CHANDLER	20.51	13.51	13.06
4206	FUJI FILM ELECTRONIC MATERIALS USA	6550 S MOUNTAIN RD	MESA	1.88	1.51	1.27
64450	FUTUREWELD CO INC	3518 E WOOD ST	PHOENIX	0.02		
36258	G & K SERVICES	4804 W ROOSEVELT ST	PHOENIX	3.76	0.91	0.76
1118	GANNON & SCOTT	2113 E SKY HARBOR CIR S	PHOENIX	0.06	2.90	0.67
41751	GCR TIRE CENTERS	2815 N 32ND AVE	PHOENIX	0.33		
994	GEMINI COMPANY INC	1711 E JACKSON ST	PHOENIX	1.25		
902	GENERAL DYNAMICS C4 SYSTEMS	8201 E MCDOWELL RD	SCOTTSDALE	3.27	4.79	1.60
4173	GLENDALE MUN SANITARY LANDFILL/FLD OPER	11480 W GLENDALE AVE	GLENDALE	0.24	14.83	82.80
73110	GLENN WEINBERGER TOPSOIL INC	39500 S 99TH AVE	MARICOPA Co	0.01	0.13	0.03
561	GLENWOOD CUSTOM CABINETS, LLC	44 E PIONEER ST	PHOENIX	2.21		
46711	GLOBAL ORGANICS INC	26305 S 295TH AVE	BUCKEYE	0.00	0.03	0.03
123080	GODADDY.COM, LLC	1402 E BUCKEYE RD	PHOENIX	0.14	3.96	0.74
1418	GOODRICH CORPORATION	3414 S 5TH ST	PHOENIX	26.71	0.36	0.16
131758	GOODRICH LIGHTING SYSTEMS	3445 S 5TH ST	PHOENIX	0.02	0.00	0.00
1374	GOODRICH TURBOMACHINERY PRODUCTS	323 S BRACKEN LN	CHANDLER	2.61	0.15	0.12
62288	GREEN WASTE RECYCLING	6840 S 35TH AVE	PHOENIX	0.09	3.02	0.69
1182	GREENWOOD MEMORY LAWN MORTUARY	2300 W VAN BUREN ST	PHOENIX	0.02	0.83	0.05
141	GRO-WELL BRANDS INC	2807 S 27TH AVE	PHOENIX	0.26		
56900	GRO-WELL BRANDS INC	3060 S 27TH AVE	PHOENIX	0.54	6.56	1.41
4498	HANSON AGGREGATES LLC	33500 W INDIAN SCHOOL RD	TONOPAH	0.03	0.39	0.08
699	HANSON AGGREGATES OF ARIZONA INC	4002 S 51ST AVE	PHOENIX	2.47	3.19	3.54
67317	HANSON PIPE & PRECAST INC	12600 W NORTHERN AVE	EL MIRAGE	0.01	0.13	0.11
112836	HASSAYAMPA PLANT #32	31908 W CAMELBACK RD	BUCKEYE	0.00	0.02	0.00
131334	HELIAE DEVELOPMENT LLC	614 E GERMANN RD	GILBERT	0.69		

Table A17 (continued). 2011 emissions (in tons/yr) from permitted facilities whose emissions are reflected in area source categories.

ID	Business Name	Address	City	VOC	NOx	CO
31565	HENRY PRODUCTS INC	302 S 23RD AVE	PHOENIX	10.77	0.44	0.37
1320	HERAEUS MATERIALS TECHNOLOGY NORTH AMERI	301 N ROOSEVELT AVE	CHANDLER	2.93	0.10	0.02
590	HOLLY ASPHALT COMPANY	7110 W NORTHERN AVE	GLENDALE	5.12	6.56	5.51
3536	HOLSUM BAKERY INC	2322 W LINCOLN ST	PHOENIX	25.02	4.04	3.39
39213	HOLSUM OF TOLLESON LLC	9600 W BUCKEYE RD	TOLLESON	21.89	2.51	2.11
76313	HONEYWELL ELECTRONIC CHEMICAL LLC	6760 W CHICAGO ST	CHANDLER	0.00		
1059	HONEYWELL ENGINES SYS & SERVICE PHX R&O	1944 E SKY HARBOR CIR	PHOENIX	13.58	1.67	3.01
355	HONEYWELL-ENGINES SYSTEMS & SERVICES	111 S 34TH ST	PHOENIX	26.84	45.90	15.35
403	HYDRO ALUMINUM NORTH AMERICA INC	249 S 51ST AVE	PHOENIX	33.53	10.99	8.42
168	HYDRO CONDUIT CORP	1011 S 43RD AVE	PHOENIX	0.01	0.02	0.01
131198	IMPERIAL WOODWORKING LLC	4012 W TURNEY AVE	PHOENIX	0.77		
354	IMSAMET OF ARIZONA	3829 S ESTRELLA PKWY	GOODYEAR	8.00	5.60	52.80
352	INCIDE TECHNOLOGIES INC	50 N 41ST AVE	PHOENIX	0.00	0.05	0.04
4033	INDUSTRIAL POWDER COATING INC	3736 S 7TH AVE	PHOENIX	0.00	0.03	0.02
777	INSULFOAM	3401 W COCOPAH ST	PHOENIX	35.39	0.72	0.60
31617	INTEL CORP CHANDLER CAMPUS (FAB 6)	5000 W CHANDLER BLVD	CHANDLER	5.35	7.92	5.89
89885	INTERCO PRINT	4501 W POLK ST	PHOENIX	0.94	0.16	0.13
4444	INTERNATIONAL RECTIFIER (EPI SERVICES)	550 W JUANITA AVE	MESA	0.56	0.16	0.03
131226	INTERSAN MANUFACTURING	1746 W FILLMORE ST	PHOENIX	0.15		
130265	IO PHOENIX ONE, LLC	615 N 48TH ST	PHOENIX	0.37	6.74	0.55
40471	IRONWOOD CUSTOM FINISHING	1822 E MADISON ST	PHOENIX	3.90		
983	ISOLA GROUP S A R L	165 S PRICE RD	CHANDLER	19.09	15.04	2.97
77985	ITC MFG	110 S 41ST AVE	PHOENIX	0.04	0.68	0.57
29975	J & A OAK INC	2452 W SHERMAN ST	PHOENIX	1.60		
732	JABIL	615 S RIVER DR	TEMPE	4.84		
121	JACKS TIRE & OIL	5925 W MONROE ST	PHOENIX	0.89	0.05	0.04
101	JBS TOLLESON INC	651 S 91ST AVE	TOLLESON	13.15	15.00	12.60
1027	JPCI SERVICES	PORTABLE		3.16	1.42	0.31
101303	KARCHER NORTH AMERICA	325 S PRICE RD	CHANDLER	0.10		
130981	KELLER ELECTRICAL INDUSTRIES INC	1881 E UNIVERSITY DR	PHOENIX	0.55	0.10	0.08
725	KILAUEA CRUSHERS INC	HWY 74	WICKENBURG	2.04	25.57	5.51
114904	KILAUEA CRUSHERS INC	16402 S TUTHILL RD	BUCKEYE	0.04	0.47	0.10
128509	KILAUEA CRUSHERS INC	HWY 85	BUCKEYE	0.09	1.12	0.24
811	KROPF WOODWORKING INC	11035 N 22ND AVE	PHOENIX	1.17		
341	L & M LAMINATES & MARBLE	813 E UNIVERSITY DR	PHOENIX	3.70		
857	L-3 COMMUNICATIONS CORPORATION	1215 S 52ND ST	TEMPE	10.65	0.16	0.03
48255	LADY WOODRUFF CABINETRY INC	4812 S 43RD AVE	PHOENIX	0.03		
817	LANE AWARD MFG INC	1118 S CENTRAL AVE	PHOENIX	0.45		
30357	LARON INC	3550 S 16TH ST	PHOENIX	0.59	0.04	0.04
96886	LEGENDS FURNITURE	10300 W BUCKEYE RD	TOLLESON	34.27		
130111	LIFEPLAN CREMATORY INC	1216 N 17TH AVE	PHOENIX	0.70	0.35	1.17
744	M E GLOBAL INC	5857 S KYRENE RD	TEMPE	25.91	12.49	49.13
1248	MAAX SPAS INDUSTRIES CORP	25605 S ARIZONA AVE	CHANDLER	37.94		
31261	MADISON GRANITE SUPPLIES	29925 N NORTH VALLEY PKWY	PHOENIX	2.09	24.38	7.17
113181	MAGELLAN AEROSPACE TURBINE SERVICES LLC	5170 W BETHANY HOME RD	GLENDALE	0.99		
131855	MARICOPA COUNTY SOLID WASTE DEPARTMENT	40135 N HWY 60	MORRISTOWN	0.30		
353	MARLAM INDUSTRIES INC	834 E HAMMOND LN	PHOENIX	10.30	0.01	0.01
61268	MASTER BLOCK	12620 W BUTLER DR	EL MIRAGE	0.00	0.03	0.02
1200	MEDTRONIC - TEMPE	2343 W MEDTRONIC WAY	TEMPE	5.62	0.56	0.47
128760	MERIDIAN OPTICAL	3711 E ATLANTA AVE	PHOENIX	1.13		

Table A17 (continued). 2011 emissions (in tons/yr) from permitted facilities whose emissions are reflected in area source categories.

ID	Business Name	Address	City	VOC	NOx	CO
82244	MESA COMMUNITY COLLEGE MORTUARY SCI PROG	7440 E TAHOE AVE	MESA	0.00	0.00	
3326	MESA FULLY FORMED LLC	1111 S SIRRINE ST	MESA	6.45		
4105	MESA INDUSTRIES INC	230 N 48TH AVE	PHOENIX	0.17		
1414	MESA MATERIALS INC	3410 N HIGLEY RD	MESA	0.18	0.50	1.21
1415	MESA MATERIALS INC	7845 W BROADWAY RD	PHOENIX	1.27	3.84	11.64
29474	METAL MANAGEMENT ARIZONA LLC	3640 S 35TH AVE	PHOENIX	0.27		
192	MEYER & LUNDAHL MANUFACTURING CO	2345 W LINCOLN ST	PHOENIX	6.56		
1203	MICROCHIP TECHNOLOGY INC	2355 W CHANDLER BLVD	CHANDLER	1.18	0.61	0.41
1875	MICROCHIP TECHNOLOGY INC	1200 S 52ND ST	TEMPE	11.95	11.22	7.05
53593	MICROSEMI CORP	3601 E UNIVERSITY DR	PHOENIX	1.65		
1277	MISSION UNIFORM & LINEN SERVICE	2652 S 16TH ST	PHOENIX	0.13	2.31	1.94
131880	MMI TANK & INDUSTRIAL SERVICE	3240 S 37TH AVE	PHOENIX	0.38		
882	MORTON SALT, INC	13000 W GLENDALE AVE	GLENDALE	0.67	9.10	2.58
128379	MURPHY WALL PRODUCTS INTERNATIONAL INC	228 E ARIZONA EASTERN AVE	BUCKEYE	0.00		
146	MWM CORPORATION	5650 W BUCKEYE RD	PHOENIX	1.12		
648	NAMMO TALLEY INC	4111 N HIGLEY RD	MESA	4.22		0.01
852	NATIONAL COUNTERTOPS & CABINETS	1202 W WATKINS ST	PHOENIX	1.84		
34197	NATIONAL GYPSUM COMPANY	1414 E HADLEY ST	PHOENIX	7.84	11.34	15.71
114015	NATIONAL SPECIALTY AGGREGATES LLC	4310 S 80TH ST	MESA	0.00	0.02	0.00
910	NELTEC INC	1420 W 12TH PL	TEMPE	5.78	7.58	1.53
812	NEOTERIC LTD	11035 N 23RD DR	PHOENIX	0.76		
3758	NK ASPHALT PARTNERS	131 S 57TH AVE	PHOENIX	1.66	1.12	0.94
128912	NORTH GATEWAY TRANSFER STATION	30205 N BLACK CANYON HWY	PHOENIX	0.01	0.08	0.02
620	NORTHWEST WATER RECLAMATION PLANT	960 N RIVERVIEW	MESA	0.09	4.49	44.55
131646	NRC, LLC	2003 W MCDOWELL RD	PHOENIX	0.04		
56506	OAK CREEK FURNITURE INC	5355 N 51ST AVE	GLENDALE	1.52		
3953	OAKCRAFT INC	7733 W OLIVE AVE	PEORIA	34.54	0.07	0.06
27925	OASIS BEDROOM COMPANY	2022 N 22ND AVE	PHOENIX	5.55		
53	OLDCASTLE PRECAST INC	411 E FRYE RD	CHANDLER	2.23	1.77	0.38
302	OLSON PRECAST OF ARIZONA INC	3045 S 35TH AVE	PHOENIX	0.00	0.00	0.00
4147	OPT CO	PORTABLE		0.74	9.08	1.95
98	PALO VERDE NUCLEAR GENERATING STATION	5801 S WINTERSBURG RD	TONOPAH	11.72	64.44	16.53
428	PALOMA GIN PROPERTIES LLC	57525 S POTATOE RD	GILA BEND	0.00	0.05	0.04
130656	PALOMA READY MIX & MATERIALS LLC	PORTABLE #1		0.00	0.05	0.01
733	PAN GLO SERVICES LLC	2401 W SHERMAN ST	PHOENIX	16.90	0.49	0.41
57852	PARADISE WASTE SRVS TRANSFER FACILITY	4845 W LOWER BUCKEYE RD	PHOENIX	1.21	0.01	0.51
1055	PARAMOUNT PETROLEUM CORP OF AZ INC	1935 W MCDOWELL RD	PHOENIX	4.12	7.95	6.68
419	PARKER HANNIFIN CORP	7777 N GLEN HARBOR BLVD	GLENDALE	17.30		
1398	PATRICIAN MARBLE CO	3333 W OSBORN RD	PHOENIX	2.11		
93102	PATRICK INDUSTRIES	601 S 54TH AVE	PHOENIX	0.15		
4241	PEPSI CO	409 S 104TH AVE	TOLLESON	5.71	8.50	14.10
61	PERMA-FINISH INC	74 N 45TH AVE	PHOENIX	0.06	0.24	0.21
29244	PET & ANIMAL LOVERS SERVICE (PALS)	3629 N 40TH AVE	PHOENIX	0.03	1.78	0.10
1014	PHOENIX BRICK YARD	1814 S 7TH AVE	PHOENIX	0.53	2.46	8.30
69	PHOENIX HEAT TREATING INC	2405 W MOHAVE RD	PHOENIX	1.38	1.49	1.26
1472	PHOENIX MANUFACTURING INC	3655 E ROESER RD	PHOENIX	2.31	0.89	0.75
1491	PHOENIX METALCRAFT INC	3845 N 29TH AVE	PHOENIX	3.74		
562	PHOENIX NEWSPAPERS INC	22600 N 19TH AVE	PHOENIX	1.54	0.43	0.10
130009	PHOENIX SAN-MAN INC	10423 S APACHE RD	BUCKEYE	0.17	5.88	1.35
1154	PING INC	2201 W DESERT COVE AVE	PHOENIX	8.46	0.18	0.15

Table A17 (continued). 2011 emissions (in tons/yr) from permitted facilities whose emissions are reflected in area source categories.

ID	Business Name	Address	City	VOC	NOx	CO
23	PIONEER ROOFING CO	9221 N 15TH AVE	PHOENIX	0.91		
73263	PMA PHOTOMETALS OF ARIZONA INC	3040 N 27TH AVE	PHOENIX	2.14	0.11	0.09
128007	PRECISION ELECTRIC CO INC	1822 E JACKSON ST	PHOENIX	0.40	0.00	0.00
4007	PRECISION TRUCK PAINTING & REPAIR INC	2212 N 27TH AVE	PHOENIX	6.18		
116742	PREFERRED PACKAGING & CONTAINER	3330 W COCOPAH ST	PHOENIX	4.29	0.09	0.07
148	PRESTO CASTING CO	5440 W MISSOURI AVE	GLENDALE	10.25	1.07	0.80
108860	PRISMA GRAPHIC CORPORATION	2937 E BROADWAY RD	PHOENIX	9.28	0.21	0.18
75998	PRO PETROLEUM PHOENIX TERMINAL	408 S 43RD AVE	PHOENIX	0.99	2.37	2.07
60889	PURCELLS WESTERN STATES TIRE	420 S 35TH AVE	PHOENIX	6.20	0.12	0.10
131158	PURE EARTH ENERGY RESOURCES LLC	1980 W COMMERCE AVE	GILBERT	0.20		
1335	QUALITY BLOCK INC	3035 S 35TH AVE	PHOENIX	0.02	0.32	0.27
90599	QUEEN CREEK LANDFILL	20224 E RIGGS RD	QUEEN CRK	3.81		
437	QUIKRETE COMPANIES-ARIZONA	26807 W BASELINE RD	BUCKEYE	0.04	1.17	0.16
131898	QUIKTRIP DISTRIBUTION - PHOENIX	8501 W LATHAM ST	TOLLESON	1.38	7.21	5.53
44182	QUINCY JOIST COMPANY	22253 W SOUTHERN AVE	BUCKEYE	3.17		
1493	R J RUFF CO	3883 W LOWER BUCKEYE RD	PHOENIX	0.03		
87807	R&D SALES INC	6200 W DOBBINS RD	LAVEEN	0.09	1.07	0.23
131682	RAIJET LAND, LLC	5601 W VAN BUREN ST	PHOENIX	2.69		
840	RECONSERVE OF ARIZONA, INC	1704 W BROADWAY RD	PHOENIX	0.05	0.93	0.78
2206	RED EAGLE ENTERPRISES INC	12946 W SANTA FE DR	SURPRISE	0.01	0.11	0.09
537	RED MOUNTAIN MINING INC	4520 N POWER RD	MESA	0.41	5.06	1.09
54	REDBURN TIRE CO	3801 W CLARENDON AVE	PHOENIX	1.19		
126322	RELIANCE CUSTOM CABINETS	825 N 73RD AVE	PHOENIX	0.84		
300	REUTER EQUIPMENT CO	3816 W LOWER BUCKEYE RD	PHOENIX	1.33		
122515	RIO SALADO LANDFILL	2802 S 7TH AVE	PHOENIX	0.10	0.38	0.09
44356	RITCHIE BROS AUCTIONEERS (AMERICA) INC	5410 W LOWER BUCKEYE RD	PHOENIX	0.37	0.04	0.03
4318	RIVER RANCH PLANT #40	5159 N EL MIRAGE RD	LITCHFLD PK	0.07	0.03	0.00
36084	ROCK SOLID INC	11550 W NORTHERN AVE	PEORIA	0.39	4.72	1.02
758	ROGERS CORP - CMD	100 N DOBSON RD	CHANDLER	0.86	0.40	0.34
759	ROGERS CORP/ADVANCED CIRCUIT MATERIALS	100 S ROOSEVELT AVE	CHANDLER	14.37	1.50	4.37
4174	ROGERS CORPORATION	2225 W CHANDLER BLVD	CHANDLER	1.72	0.01	0.01
130171	ROYDEN CONSTRUCTION CO.	3423 S 51ST AVE	PHOENIX	0.00	0.02	0.00
132153	SAINT GOBAIN SOLAR GLASS FACILITY	17300 W BROADWAY RD	GOODYEAR	1.37	0.02	0.00
132005	SALT RIVER MATERIALS GROUP	6204 W SOUTHERN AVE	LAVEEN	0.00	0.06	0.01
86686	SAN TAN TRANSFER STATION	4040 S 80TH ST	MESA	0.02	0.23	0.05
42617	SASCO/SOUTHERN ARIZONA STUD COMPANY	5415 W MOHAVE ST	PHOENIX	0.30		
772	SCHAUMPLAST PRECISION FOAM MOLDING LP	101 S 30TH ST	PHOENIX	5.74	0.45	0.38
4072	SCHREIBER FOODS INC	2122 S HARDY DR	TEMPE	1.73	5.07	15.92
255	SCHUFF STEEL CO	619 N COOPER RD	GILBERT	1.97		
266	SCHUFF STEEL CO	420 S 19TH AVE	PHOENIX	7.31	5.23	1.13
246	SCHULT HOMES	231 N APACHE RD	BUCKEYE	10.77		
120518	SEALMASTER AZ	2020 W MCDOWELL RD	PHOENIX	0.72	0.53	0.38
1332	SEMIRAY INSPECTION SERVICES	3027 E WASHINGTON ST	PHOENIX	0.45		
1351	SERENITY MORTUARY SERV INC	2514 S 6TH AVE	PHOENIX	0.02	1.31	0.07
1036	SERVICE BRASS FOUNDRY	2501 W JACKSON ST	PHOENIX	0.03	0.04	0.03
1169	SHAMROCK FOODS CO	2228 N BLACK CANYON HWY	PHOENIX	0.49	8.92	7.49
130996	SHUTTERZ INC	6655 W FRYE RD	CHANDLER	1.14		
4050	SIGNATURE BREADS INC	1120 W FAIRMONT DR	TEMPE	5.19	0.38	0.32
57976	SIGNETIX INC	2611 S 7TH ST	PHOENIX	2.33	0.59	0.49
27933	SKUNK CREEK LANDFILL	3165 W HAPPY VALLEY RD	PHOENIX	0.77	4.47	1.99

Table A17 (continued). 2011 emissions (in tons/yr) from permitted facilities whose emissions are reflected in area source categories.

ID	Business Name	Address	City	VOC	NOx	CO
4176	SKY HARBOR TRANSFER STATION	2425 S 40TH ST	PHOENIX	1.26		
131809	SKY PILOT VERTICAL WIND TUNNEL LLC	PORTABLE		0.00	0.02	0.01
39980	S-L SNACKS AZ, LLC	1200 N BULLARD AVE	GOODYEAR	17.82	5.99	5.03
1213	SMITH PRECAST	2410 W BROADWAY RD	PHOENIX	0.01		
129	SODEXO COMMERCIAL LINEN EXCHANGE	4445 S 36TH ST	PHOENIX	0.28	5.17	4.34
131686	SOLAR & RENEWABLES MANAGEMENT, LLC	29505 W SOUTHERN AVE	BUCKEYE	0.00	0.15	0.02
89313	SOLVENT RECY-CLEAN	1850 W BROADWAY RD	PHOENIX	0.51	0.02	0.00
129028	SONORAN DOORS INC	21002 N 19TH AVE	PHOENIX	1.25		
4086	SOUTH BAY CIRCUITS INC	6409 W COMMONWEALTH PL	CHANDLER	2.90		
2108	SOUTHWEST AIRLINES CO	4153 E SKY HARBOR BLVD	PHOENIX	6.75	0.25	0.05
131861	SOUTHWEST ARCHITECTURAL CASTINGS	5343 W MOHAVE ST	PHOENIX	0.17		
838	SOUTHWEST POWDER COATING INC	116 N 59TH AVE	PHOENIX	0.02	0.17	0.14
612	SOUTHWEST PRODUCTS CORP	5143 W ROOSEVELT ST	PHOENIX	1.46		
854	SOUTHWEST REFINING CORP	1205 W HILTON AVE	PHOENIX	0.00	0.01	0.01
31643	SOUTHWEST REGIONAL LANDFILL	24427 S HWY 85	BUCKEYE	0.56	7.17	1.46
130102	SOUTHWEST ROCK PRODUCTS	6500 N 115TH AVE	GLENDALE	0.12	1.51	0.33
130199	SPECIALTY TEXTILE SERVICES	720 W BUCHANAN ST	PHOENIX	0.19	3.49	2.93
136	SPECIALTY VERMICULITE CORP.	4220 W GLENROSA AVE	PHOENIX	0.92	0.10	0.09
122	SPELLMAN HARDWOODS INC	4645 N 43RD AVE	PHOENIX	0.08		
80437	SR 85 LANDFILL PUBLIC WORKS DEPT	28633 W PATTERSON RD	BUCKEYE	0.07	2.80	0.18
582	STONE CREEK INC	4221 E RAYMOND ST	PHOENIX	29.32		
388	STOROPACK INC	77 N 45TH AVE	PHOENIX	3.08	0.08	0.07
131720	STP PERFORMANCE COATING LLC	406 E PIONEER ST	PHOENIX	7.32		
1214	SULZER EMS INC	2412 W DURANGO ST	PHOENIX	2.00	0.01	0.01
4400	SUMCO SOUTHWEST CORPORATION	19801 N TATUM BLVD	PHOENIX	7.52	11.31	2.32
71801	SUMIKA ELECTRONIC MATERIALS INC	3832 E WATKINS ST	PHOENIX	0.15	0.28	0.06
378	SUN LAND MATERIALS	6950 W SOUTHERN AVE	LAVEEN	0.37	4.53	0.98
130187	SUN VALLEY OAK	801 S 25TH AVE	PHOENIX	1.58		
31	SUNLAND MEMORIAL PARK/MORT/CREM CTR	15826 N DEL WEBB BLVD	SUN CITY	0.00	0.24	0.01
42102	SUNTRON CORPORATION	2401 W GRANDVIEW RD	PHOENIX	4.90		
41431	SUPER RADIATOR COILS LTD	2610 S 21ST ST	PHOENIX	0.02	0.33	0.27
165	SUPERLITE BLOCK	301 E BASELINE RD	GILBERT	0.00	0.06	0.05
392	SUPERLITE BLOCK	1639 E DEER VALLEY RD	PHOENIX	0.00	0.05	0.01
3691	SUPREME OIL CO	2110 GRAND AVE	PHOENIX	3.05		
121397	SVP MFG INC	702 N 21ST AVE	PHOENIX	0.90		
131377	SWIM PLATFORMS INC	3220 S 38TH ST	PHOENIX	5.52		
1109	TEMPE CAMPUS SPV, LLC	2100 E ELLIOT RD	TEMPE	0.33	1.19	0.84
1102	TEVA PHARMACEUTICALS USA, INC	2050 S 35TH AVE	PHOENIX	0.45	1.07	0.90
249	THE BOEING COMPANY	5000 E MCDOWELL RD	MESA	18.26	1.69	1.76
1216	THE COOKSON COMPANY INC	2417 S 50TH AVE	PHOENIX	2.05	0.27	0.22
122552	THE SHERWIN-WILLIAMS COMPANY 4380	1515 E HADLEY ST	PHOENIX	1.00		
4386	THERMO FLUIDS INC	4301 W JEFFERSON ST	PHOENIX	0.14	0.41	0.10
552	THORNWOOD FURNITURE MFG	5125 E MADISON ST	PHOENIX	62.84	0.11	0.57
3806	TODDS A DIV OF HJ HEINZ	610 S 56TH AVE	PHOENIX	0.02	0.38	0.32
56	TPAC A DIVISION OF KIEWIT WESTERN CO	3052 S 19TH AVE	PHOENIX	0.00	0.00	0.00
37546	TRENWYTH INDUSTRIES	4626 N 42ND AVE	PHOENIX	4.04	0.74	0.62
129453	TRICOM COATINGS, INC	2639 N 31ST AVE	PHOENIX	1.94		
1510	TRIUMPH AIR REPAIR	4010 S 43RD PL	PHOENIX	1.46	1.79	0.18
1122	TRIUMPH MANUFACTURING LLC	2130 S INDUSTRIAL PARK AVE	TEMPE	2.59		
1261	TROY CORPORATION	113 S 47TH AVE	PHOENIX	0.13	0.05	0.01

Table A17 (continued). 2011 emissions (in tons/yr) from permitted facilities whose emissions are reflected in area source categories.

ID	Business Name	Address	City	VOC	NOx	CO
30173	TRUCK WORKS	3216 W SHERMAN ST	PHOENIX	5.17		
819	TRW VEHICLE SAFETY SYSTEMS INC	11202 E GERMANN RD	MESA	2.11	0.25	0.31
39309	UNION DISTRIBUTING COMPANY	622 S 56TH AVE	PHOENIX	4.45		
234	UNITED DAIRYMEN OF ARIZONA	2008 S HARDY DR	TEMPE	2.52	28.07	31.70
63962	UPPER CRUST BAKERY	3655 W WASHINGTON ST	PHOENIX	7.97	1.09	0.92
1504	US AIRWAYS	4000 E SKY HARBOR BLVD	PHOENIX	1.25		
131506	USAA (UNITED SERVICES AUTOMOBILE ASSOC)	ONE N NORTERRA DR	PHOENIX	0.02	0.55	0.13
28393	UTC AEROSPACE SYSTEMS	1007 E UNIVERSITY DR	PHOENIX	3.04		
827	VALLEY INDUSTRIAL PAINTING	1131 W WATKINS ST	PHOENIX	11.85	0.44	0.37
30171	VEOLIA TRANSPORTATION PHOENIX	2225 W LOWER BUCKEYE RD	PHOENIX	0.92	0.19	0.16
194	VEOLIA TRANSPORTATION SERVICES, INC	2010 W DESERT COVE AVE	PHOENIX	1.21	0.11	0.09
187	VERCO DECKING INC	4340 N 42ND AVE	PHOENIX	0.53	0.15	0.12
130178	VULCAN MATERIALS CO DBA CAL-MAT COMPANY	3205 S 24TH ST	PHOENIX	0.10	1.21	0.26
2	VULCAN MATERIALS CO-WESTERN DIVISION	14521 N 115TH AVE	EL MIRAGE	0.20	8.02	16.30
90	VULCAN MATERIALS CO-WESTERN DIVISION	4830 S 43RD AVE	PHOENIX	3.45	5.85	1.38
4022	WALKER POWER SYSTEMS INC	1301 E JACKSON ST	PHOENIX	1.46	0.11	0.02
130002	WASTE MGMT 7TH AVE TRANSFER & LANDFILL	3000 S 7TH AVE	PHOENIX	0.58	7.29	1.60
113519	WASTE MGMT PHX HAUL CONTAINER SHOP	2441 S 40TH ST	PHOENIX	10.38		
1149	WEAVER QUALITY SHUTTERS INC	218 S 15TH ST	PHOENIX	1.55		
125450	WESTERN AGGREGATES PLANT #41	31805 W SOUTHERN AVE	BUCKEYE	0.15	10.67	2.36
1475	WESTERN BLOCK CO INC	4021 S 19TH AVE	PHOENIX	0.02	0.30	0.25
4131	WESTERN DIGITAL PROPERTIES	1000 E BELL RD	PHOENIX	1.85	1.65	1.66
36676	WESTERN MILLING	310 S 24TH AVE	PHOENIX	0.00	0.05	0.01
1240	WESTERN MILLWORK INC	2525 W CORONADO RD	PHOENIX	4.03		
130574	WESTERN MILLWORK INC	2940 W WILLET TA ST	PHOENIX	0.85		
1339	WESTERN REFINING COMPANY LP	3050 S 19TH AVE	PHOENIX	0.18	2.32	1.95
2703	WESTERN STATES PETROLEUM	450 S 15TH AVE	PHOENIX	13.30		
91589	WHITE TANKS TRANSFER STATION	18605 W MCDOWELL RD	GOODYEAR	0.03	0.29	0.06
398	WICKENBURG FACILITY	44605 GRAND AVE	WICKENBURG	0.06	0.58	0.12
515	WINGFOOT COMMERCIAL TIRE SYSTEMS LLC	3007 N 31ST AVE	PHOENIX	0.36		
128707	WOOD UNLIMITED INC (AIR)	9801 N LITCHFIELD RD	EL MIRAGE	1.22	15.31	3.30
1382	WOODCASE FINE CABINETRY INC	3255 W OSBORN RD	PHOENIX	13.60		
35359	WOODESIGN A CORPORATION	3234 E CORONA AVE	PHOENIX	0.62		

5. Summary of All Revisions to the 2011 Periodic Emissions Inventory for Ozone Precursors

Table A18 below reflects all revisions made (to both annual and season-day emission calculations) resulting from the two sets of changes described in this Addendum, namely: (1) the inclusion of additional Emission Reduction Credits and (2) the “recasting” of ozone season-day emissions to reflect the three-month period from June–August 2011 (vs. July–September in the original publication).

Table A18. Revised annual and season-day emissions from all sources in the eight-hour ozone nonattainment area. (cf. Table 1.6–9, pp. 9–10). Shaded cells indicate revised values vs. the original 2011 PEI report.

Source Category	Annual emissions (tons/year)			Season-day emissions (lbs/day)		
	VOC	NO _x	CO	VOC	NO _x	CO
POINT SOURCES:	653.84	1,744.32	1,063.18	4,279.8	15,353.4	9,632.0
Emission Reduction Credits	213.03	14.14	15.30	1,167.3	77.5	83.8
Total, All Point Sources:	866.87	1,758.46	1,078.48	5,447.1	15,430.9	9,715.8
AREA SOURCES:						
<i>Fuel combustion:</i>						
Industrial distillate oil: Boilers	0.61	60.61	15.15	3.9	388.5	97.1
Industrial distillate oil: Engines	0.00	1,830.35	393.95	0.0	11,733.0	2,525.3
Industrial natural gas	36.83	727.80	453.34	216.9	4,285.3	2,669.3
Comm./inst. distillate oil: Boilers	0.00	0.12	0.03	0.0	0.8	0.2
Comm./inst. distillate oil: Engines	0.00	3.70	0.80	0.0	23.7	5.1
Comm./inst. natural gas	54.42	1,079.44	662.05	251.7	4,992.0	3,061.7
Residential distillate oil	0.01	0.35	0.10	0.0	0.0	0.0
Residential natural gas	50.20	857.96	365.09	120.5	2,060.1	876.7
Residential LPG	2.02	51.93	14.73	0.0	0.0	0.0
Residential wood combustion	515.53	58.38	2,993.75	0.0	0.0	0.0
Residential kerosene	0.00	0.03	0.01	0.0	0.0	0.0
All Fuel Combustion:	659.63	4,670.68	4,898.99	593.0	23,483.5	9,235.4
<i>Industrial processes:</i>						
Chemical manufacturing	77.09			596.5		
Commercial cooking	151.03		397.07	829.8		2,181.7
Bakeries	77.85			545.4		
Secondary metal production	41.01	15.02	98.36	306.4	107.9	697.4
Rubber/plastic product manufacturing	1,759.15			14,110.1		
Electrical equipment manufacturing	122.80	23.47	2.98	746.2	135.8	16.4
Industrial processes, NEC	47.55	224.92	91.84	318.0	1,245.8	525.2
All Industrial Processes:	2,276.48	263.41	590.27	17,452.4	1,489.5	3,420.8
<i>Solvent use:</i>						
Architectural coatings	5,033.13			30,973.1		
Auto refinishing	1,327.53			10,211.8		
Traffic markings	171.12			1,737.5		
Factory finished wood	137.12			1,390.7		
Wood furniture	414.77			3,419.9		
Aircraft surface coating	65.84			473.1		
Miscellaneous surface coating	315.02			2,440.0		
Degreasing	216.62			1,445.1		
Dry cleaning	23.42			180.1		
Graphics arts	289.73			2,216.1		
Miscellaneous industrial solvent use	718.75			5,104.6		
Consumer and commercial products	17,605.51			96,468.5		
Cutback asphalt	788.72			4,309.9		
Emulsified asphalt	817.24			4,465.8		
Roofing asphalt	3.08			23.7		
Agricultural pesticides	212.18			1,697.3		
All Solvent Use:	28,139.77			166,557.2		

Table A18 (continued). Revised annual and season-day emissions from all sources in the eight-hour ozone nonattainment area.

Source Category	Annual emissions (tons/year)			Season-day emissions (lbs/day)		
	VOC	NO _x	CO	VOC	NO _x	CO
Storage/transport:						
Residential portable gas cans	2,968.67			16,311.4		
Commercial portable gas cans	570.89			3,136.7		
Bulk plants	120.91			659.3		
Gas stations Stage I: Submerged fill	85.08			526.9		
Gas stations Stage I: Bal. submerged fill	229.60			1,421.9		
Gas stations Stage II	0.00			0.0		
Underground tanks: Breathing/emptying	777.00			4,124.4		
Airports: aviation gasoline Stage I	344.41			1,887.2		
Airports: aviation gasoline Stage II	17.87			97.9		
Truck: gasoline (tank trucks in transit)	50.82			314.7		
Pipeline gasoline	17.32			94.5		
Volatile organic liquids storage/transport	28.80			169.3		
All Storage/Transport:	5,211.35			28,744.2		
Waste treatment/disposal:						
On-site incineration	0.17	3.31	0.79	1.1	21.4	5.3
Open burning: Land clearing debris	0.30	0.13	2.81	9.1	4.1	86.4
Landfills	36.59	30.40	108.55	200.7	167.4	596.4
Publicly owned treatment works	75.88			583.7		
Leaking underground storage tanks	1.05			32.3		
Other waste	2.12	22.19	77.93	10.9	122.8	431.4
All Waste Treatment/Disposal:	116.10	56.04	190.06	837.8	315.6	1,119.6
Miscellaneous area sources:						
Agricultural field burning	15.28	6.79	144.32	470.2	209.0	4,440.7
Structure fires	14.95	1.90	81.55	73.3	9.3	399.7
Aircraft engine testing	4.72	46.36	16.16	26.1	259.3	91.2
Vehicle fires	9.38	1.17	36.64	51.4	6.4	200.8
Crematories	1.18	11.14	2.22	50.9	88.1	17.2
Accidental releases	0.45	0.00	0.00	0.6	0.0	0.0
Hospitals	8.66			52.9		
Wildfires	206.08	93.95	4,379.28	13,282.9	6,055.4	282,261.6
Prescribed fires	0.39	0.38	4.54	129.2	127.1	1,523.2
All Miscellaneous Area Sources:	261.09	161.70	4,664.71	14,137.4	6,754.7	288,934.4
ALL AREA SOURCES:	36,664.42	5,151.83	10,344.03	228,322.0	32,043.4	302,710.1
NONROAD MOBILE SOURCES:						
Agricultural equipment	22.52	193.22	177.56	200.6	1,679.5	1,574.6
Airport GSE (+APU)	111.43	404.49	3,259.08	590.0	2,155.7	17,236.5
Commercial equipment	1,916.15	1,355.57	30,094.46	14,818.6	8,284.7	203,526.4
Construction & mining equipment	1,941.80	13,349.23	14,855.32	13,927.2	93,159.3	106,091.9
Industrial equipment	339.78	1,831.45	7,110.33	2,209.9	11,718.2	46,031.6
Lawn and garden equipment	4,970.15	876.55	55,425.05	54,825.3	7,329.9	552,709.8
Pleasure craft	530.39	96.56	1,249.66	13,207.4	2,420.5	32,628.3
Railway maintenance equipment	1.96	8.64	16.67	14.5	59.7	119.5
Recreational equipment	684.30	29.78	2,871.27	8,855.0	339.9	37,525.9
Aircraft	1,705.43	2,585.98	11,719.36	8,355.4	12,789.2	63,737.5
Locomotives	50.15	901.12	153.29	274.8	4,937.7	839.9
ALL NONROAD MOBILE SOURCES:	12,274.06	21,632.59	126,932.05	117,278.7	144,874.4	1,062,022.0
ONROAD MOBILE SOURCES:	24,110.04	56,861.82	226,581.20	147,299.2	309,069.0	1,310,973.1
BIOGENIC SOURCES:	55,311.84	527.18	5,934.55	701,386.9	6,304.2	66,534.2
TOTAL, ALL SOURCE CATEGORIES:	129,277.24	85,931.88	370,870.31	1,199,733.8	507,721.8	2,751,955.2