

ATTACHMENT F:
Rate-of-Progress Emissions Inventory

Prepared for:

Clark County Department of Environment and Sustainability
Division of Air Quality
4701 W. Russell Road, Suite 200
Las Vegas, NV 89118

Prepared by:

Ramboll Americas Engineering Solutions, Inc.
7250 Redwood Blvd., Suite 105
Novato, California 94945

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2017 and 2026 Emission Inventories for the 15% Rate of Progress (ROP) Plan for the Clark County Ozone Nonattainment Area



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1.0 Introduction

In 2018, the US Environmental Protection Agency (EPA) designated a portion of Clark County, Nevada as a Marginal Nonattainment area under the 2015 ozone National Ambient Air Quality Standard (NAAQS) of 70 parts per billion (ppb) (Federal Register, 2018). The nonattainment boundary is defined as the Las Vegas Valley (LVV), hydrographic area 212 (HA 212), as recommended by the Nevada Division of Environmental Protection (NDEP) and Clark County (2018). Due to continued exceedances of the standard through 2020, the EPA reclassified the Clark County Nonattainment Area (HA 212) to Moderate with an attainment date of August 3, 2024, according to the 2021-2023 8-hour ozone Design Value (DV) (Federal Register, 2022; 2023). As exceedances continued through 2023, EPA will bump up the area to Serious later in 2024/25 with attainment due in 2027 according to the 2024-2026 DV.

To support an ozone attainment demonstration for the Moderate State Implementation Plan (SIP), Ramboll assisted the Clark County Department of Environment and Sustainability (DES) to develop a 15% Rate of Progress (ROP) Plan for volatile organic compound (VOC) emissions within HA 212 (Ramboll, 2023b). That work included reporting 2017 base year and projected 2023 anthropogenic emission inventories for HA 212 (Ramboll, 2023a). In response to comments from EPA on the 15% ROP Plan, DES agreed to update the Plan to reflect an extended implementation schedule for ROP control measures out to 2026.

This memorandum describes the methodologies and technical details that DES and Ramboll used to develop an updated 2017 base year and projected 2026 future year anthropogenic emissions inventory for HA 212. The purpose of this inventory is to support the revised 15% ROP Plan.

2.0 2017 and 2026 Ozone Season Day Emissions Inventory

We developed 2017 base year and 2026 future year anthropogenic ozone season weekday emission estimates for ozone precursors within HA 212 only. Specifically, the inventory represents a typical July work weekday. Figure 2-1 shows the Clark County boundary and HA 212 within Clark County. The figure also shows a grid boundary covering HA 212 used to generate emission estimates for certain source sectors using the Sparse Matrix Operator Kernel Emissions (SMOKE; UNC, 2020) processing system. The inventory includes all anthropogenic emissions categories: stationary point sources, stationary nonpoint (area) sources, on-road mobile sources, nonroad mobile sources, airports, and locomotive sources. The primary data sources for the inventory comprised locally specific activity data, the EPA's 2017 Emissions Modeling platform (EMP) based on the 2017 National Emissions Inventory (EPA, 2022), and EPA's 2016v3 EMP 2026 projections (EPA, 2023).

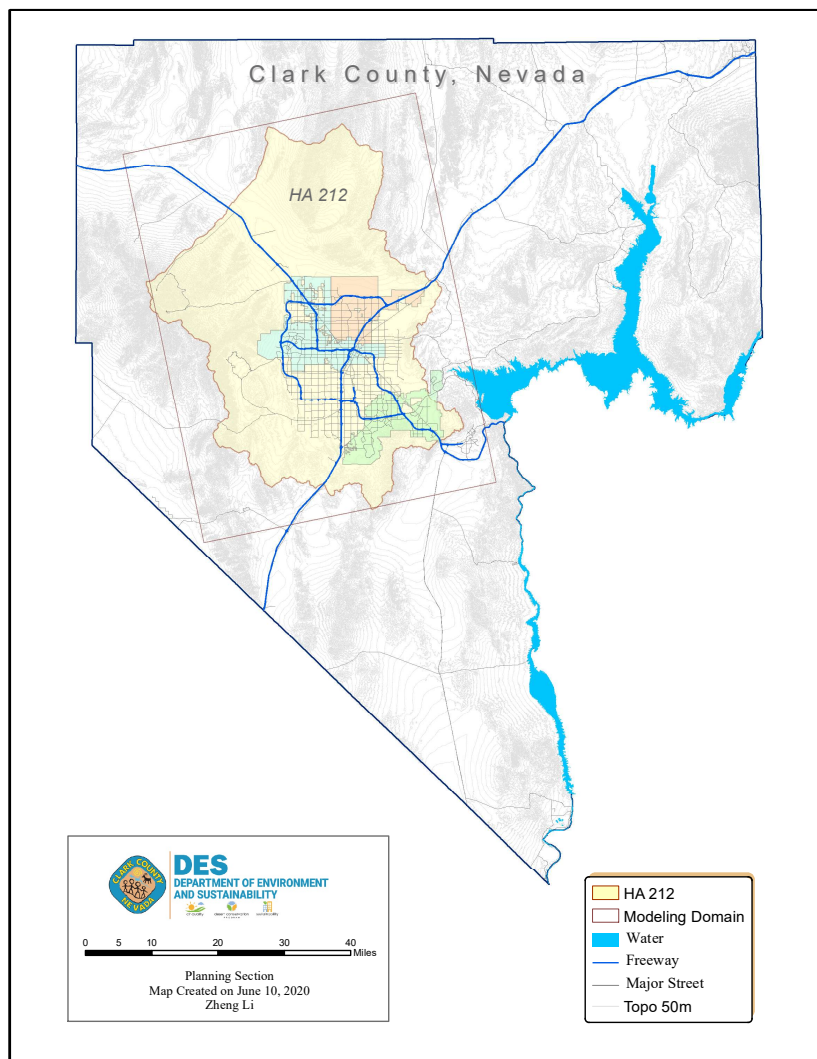


Figure 2-1. Clark County and the ozone nonattainment area (HA 212). The box covering HA 212 labeled "Modeling Domain" refers to the SMOKE emissions processing grid used to estimate HA 212 ozone season weekday emissions for certain source sectors.

The HA 212 inventory includes the effects from applicable on-the-books regulations such as the Tier 3 Motor Vehicle Emissions and Fuel Standards,¹ Final Rule for Control of Emissions of Air Pollution From Nonroad Diesel Engines and Fuel,² and Consumer Products: National Volatile Organic Compound Emissions Standards.³

¹ <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-control-air-pollution-motor-vehicles-tier-3>, Accessed Online in September 2022.

² <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-control-emissions-air-pollution-nonroad>, Accessed Online in September 2022.

³ <https://www.epa.gov/stationary-sources-air-pollution/consumer-products-national-volatile-organic-compound-emission>, Accessed Online in September 2022.

Table 2-1 and Table 2-2 show 2017 and 2026 HA 212 emission estimates for VOC and NO_x, respectively, by major source category, representing a typical ozone season weekday. On-road and nonroad mobile sectors are the dominant sources for NO_x, followed by airports. The NO_x emissions decline in 2026 is primarily due to turnover in nonroad and on-road fleets reflecting effects from federal emission controls. The nonpoint sector is the dominant anthropogenic source for VOCs followed by on-road and nonroad mobile sources. The sections below describe each source category in detail. Locomotive and airport emissions are excluded from other source categories.

Table 2-1. Summary of HA 212 ozone season weekday VOC emissions (tons per day, TPD).

Source Category	2017 Base VOC (TPD)	2026 Base VOC (TPD)	Difference (%)
Point source	1.25	1.35	8%
Nonpoint source	57.72	61.69	7%
On-road mobile	24.81	14.60	-41%
Non-road mobile	24.03	24.25	1%
Airports (commercial & Federal)	1.96	2.75	40%
Locomotives	0.04	0.03	-25%
ERC		0.05	
Total	109.81	104.72	-5%

Table 2-2. Summary of HA 212 ozone season weekday NO_x emissions (tons per day, TPD).

Source Category	2017 Base NO _x (TPD)	2026 Base NO _x (TPD)	Difference (%)
Point source	2.92	3.38	16%
Nonpoint source	6.15	6.53	6%
On-road mobile	37.91	14.12	-63%
Non-road mobile	36.98	19.10	-48%
Airports (commercial & Federal)	11.90	15.90	34%
Locomotives	0.80	0.62	-23%
ERC		0.92	
Total	96.66	60.57	-37%

3.0 On-road Mobile Source Emissions

On-road mobile sources include automobiles, motorcycles, buses, and trucks traveling on local roads and state and national highways. The emissions estimates were developed from the EPA's MOtor Vehicle Emissions Simulator, version 4 (MOVES4⁴), the latest release available at the time of analysis. Ramboll ran MOVES4 in inventory mode to generate on-road mobile source emissions estimates for a typical July weekday within HA 212.

⁴ <https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves>.

3.1 MOVES Inputs

MOVES4 includes 13 source types (Table 3-1) and four roadway types (Table 3-2). DES developed MOVES inputs representing Clark County for the 2017 base year and the 2026 future year. These inputs were based on the latest available information and data sources to ensure accuracy and representativeness. Once the input databases were developed, the HA 212 sub-county input databases were also prepared based on either actual activity data or spatial surrogates. Subsequently, Ramboll ran the MOVES4 model with the databases for HA 212 to generate the ozone precursor inventories for the on-road source category.

Table 3-1. MOVES source types.

Source Type ID	MOVES Source Type Name
11	Motorcycle
21	Passenger Car
31	Passenger Truck
32	Light Commercial Truck
41	Other Buses
42	Transit Bus
43	School Bus
51	Refuse Truck
52	Single Unit Short-haul Truck
53	Single Unit Long-haul Truck
54	Motor Home
61	Combination Short-haul Truck
62	Combination Long-haul Truck

Table 3-2. Map of Highway Performance Monitoring System (HPMS) road types to MOVES road types.

HPMS Road Type	MOVES Road Type
11: Rural Principal Arterial – Interstate	2: Rural Restricted Access
13: Rural Principal Arterial - Other	3: Rural Unrestricted Access
15: Rural Minor Arterial	
17: Rural Major Collector	
19: Rural Minor Collector	
21: Rural Local System	
23: Urban Principal Arterial – Interstate	4: Urban Restricted Access
25: Urban Principal Arterial – Other Freeways	5: Urban Unrestricted Access
27: Urban Principal Arterial – Other	
29: Urban Minor Arterial	
31: Urban Collector	
33: Urban Local System	

The key MOVES inputs include vehicle fleet activity data such as vehicle miles traveled (VMT), vehicle population by vehicle source type (or vehicle class), fleet age distribution, fuel parameters, and inspection and maintenance (I/M) programs.

3.1.1 Clark County Vehicle Classification Study

Since vehicle classification is a crucial component for developing an on-road emission inventory, DES completed a vehicle classification study in June 2018. The study used 2014-2016 traffic count data collected by the Nevada Department of Transportation (NDOT) and included an on-road license plate survey at selected roadway locations. The collected license plate numbers were matched to vehicle identification numbers (VIN), then decoded to obtain vehicle attributes that allowed DES’s contractor to classify cars versus light-duty trucks. The primary products of the vehicle classification study included VMT mix and temporal profiles, which were incorporated into the 2017 MOVES input database. The MOVES temporal profiles included monthly, weekly, and hourly traffic profiles.

VMT Mix Profiles

Figure 3-1 shows the VMT mix profiles from the DES study by MOVES road type. Rural Restricted Access (Road Type 2) has the highest amount of heavy-duty VMT (24%), which decreases from left to right in the figure: from Road Type 2 to Rural Unrestricted Access (Road Type 3) to Urban Restricted Access (Road Type 4) to Urban Unrestricted (Road Type 5).

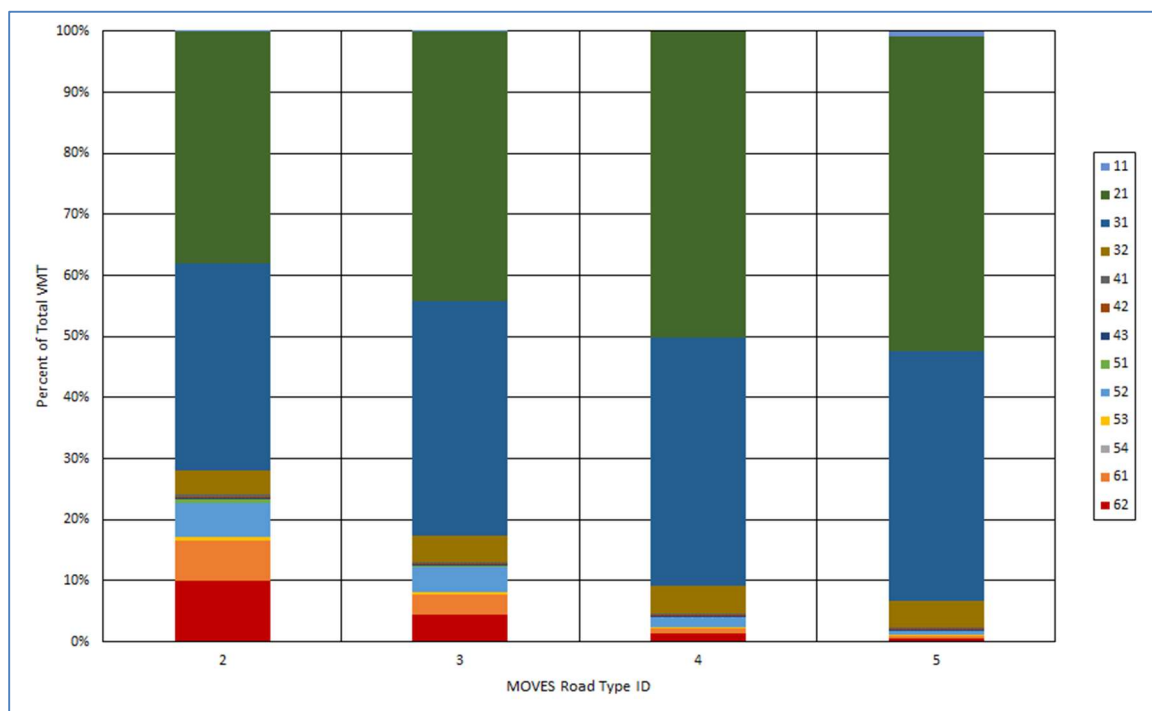


Figure 3-1. Summary of VMT mix by vehicle type on each MOVES road type. Vehicle types are listed in Table 3-1.

Monthly Traffic Profiles

Figure 3-2 displays the monthly VMT profiles for MOVES. The MOVES model distributes annual VMT to monthly totals using the monthly VMT fractions shown in Figure 3-2. Clark County’s monthly variation does not indicate a strong seasonal influence on VMT. These monthly variations are based on the NDOT traffic counts during 2014-2016. NDOT has continuous traffic counters operating throughout the year.

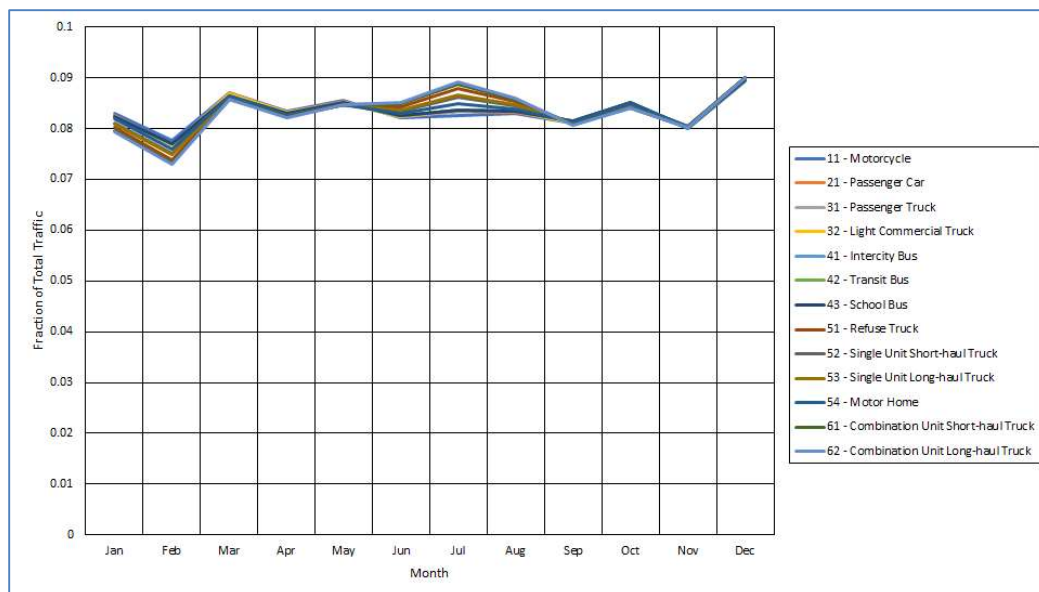


Figure 3-2. MOVES monthly VMT fractions for Clark County, NV.

Weekly Traffic Profiles

The day-of-week profiles in MOVES apportion weekly VMT to two periods of the week: “weekday,” consisting of 5 days, and “weekend,” consisting of 2 days. Figure 3-3 shows a sample of the profiles for passenger cars. The ratio of weekday to weekend VMT grows from left to right, moving from Rural (Road Types 2 and 3) to Urban (Road Types 4 and 5). This pattern of higher weekday VMT on urban roads and unrestricted roads was generally true for all the source types.

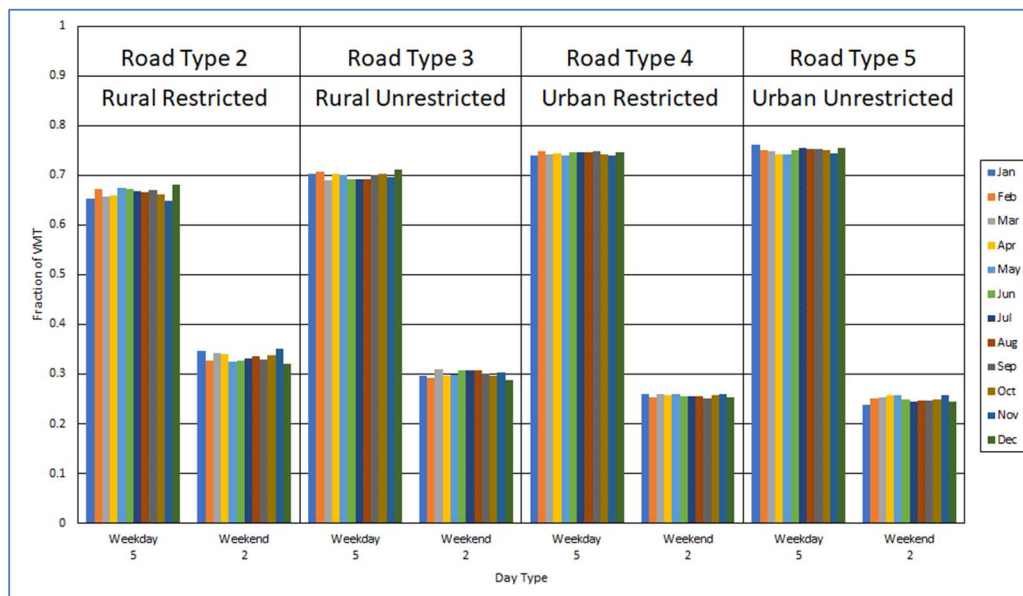


Figure 3-3. An Example of MOVES VMT fractions (passenger cars) by day-of-week type.

Hourly Traffic Profiles

Figure 3-4 shows a sample of MOVES hourly VMT fractions for passenger cars traveling on weekdays (solid line series) and weekends (broken line series) in Clark County for each of the four MOVES road types. On weekdays, the two Urban Road Types—4 (grey) and 5 (yellow)—have prominent morning peaks in the VMT fractions. Weekend profiles on all road types reach their high point midday, i.e., between the hours of about noon to 4 PM.

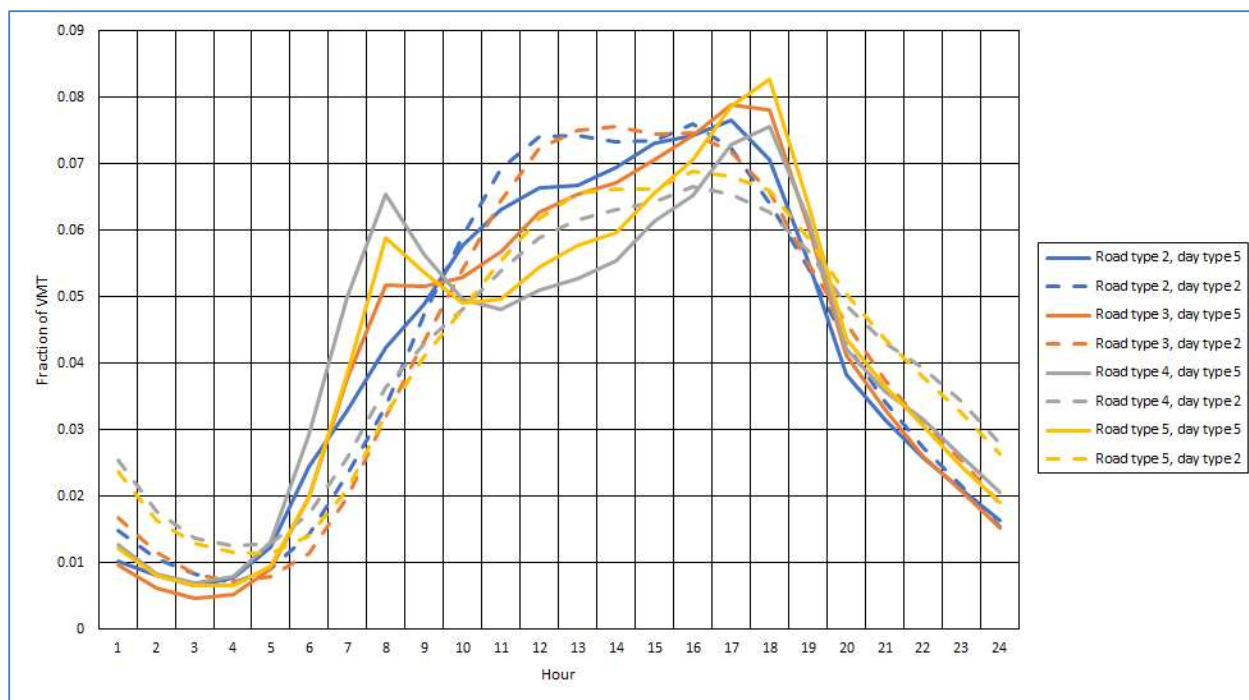


Figure 3-4. An example of MOVES hourly VMT Fractions (passenger cars).

3.1.2 Other MOVES Inputs

Activity data for each vehicle type, such as VMT and vehicle population, are important inputs for MOVES. VMT data for the base year (2017) inventory are derived from NDOT’s 2017 annual Highway Performance Monitoring System (HPMS) reports. Per special request, NDOT also provided DES with VMT data for the HA 212 sub-county area, which was used for on-road inventory development.

The MOVES model requires annual or daily VMT by vehicle type. Using the VMT mix information developed from the Clark County Vehicle Classification Study, DES generated annual VMTs for each vehicle source type for HA 212. Table 3-3 shows Clark County 2017 annual VMTs by function class within HA 212 from NDOT.

For urban road types, 2026 VMT was projected from 2017 using growth factors from forecasts derived from travel demand modeling conducted by the Regional Transportation Commission of Southern Nevada (RTC). For rural road types, a linear regression projection from historical NDOT HPMS reports was used to project VMT. Table 3-4 lists annual VMT by source type for the two modeling years.

Table 3-3. Clark County 2017 annual VMT by function class within HA 212.

Function Class	2017 Annual VMT
Rural Interstate	37,956,020
Rural Other Principal Arterial	71,177,655
Rural Minor Arterial	0
Rural Major Collector	45,745,974
Rural Minor Collector	1,218,372
Rural Local	8,512,560
Urban Interstate	3,158,264,116
Urban Other Freeways and Expressways	1,509,145,790
Urban Other Principal Arterial	2,045,321,410
Urban Minor Arterial	3,937,878,139
Urban Collector	1,617,429,935
Urban Local	4,118,471,242
Annual Total	16,551,121,213

Table 3-4. Clark County annual VMT by vehicle type within HA 212.

Source Type ID	Source Type Name	2017	2026
11	Motorcycle	93,203,739	110,688,308
21	Passenger Car	8,396,862,937	9,972,073,598
31	Passenger Truck	6,754,358,072	8,021,442,807
32	Light Commercial Truck	722,814,819	858,411,365
41	Other Buses	45,433,736	49,716,622
42	Transit Bus	28,032,592	33,802,966
43	School Bus	21,850,000	29,677,620
51	Refuse Truck	12,033,030	14,290,368
52	Single Unit Short-haul Truck	202,484,000	240,469,014
53	Single Unit Long-haul Truck	10,078,340	11,968,988
54	Motor Home	1,640,285	1,947,994
61	Combination Short-haul Truck	140,293,750	166,612,175
62	Combination Long-haul Truck	122,035,913	144,929,257
Total:		16,551,121,213	19,656,031,081

DES derived the vehicle type population data for the entire county primarily from the Nevada Department of Motor Vehicle (DMV) registration database. Adjustments were made for transit buses based on data obtained from the RTC and for school bus populations based on reports from the online magazine SchoolBus. Vehicle population estimates for combination short-haul and long-haul trucks were based on MOVES default database. The vehicle populations by source type were projected from 2017 to 2026 using surrogates such

as human population for light duty vehicles, and VMT for heavy duty trucks. For the HA 212 sub-county area, vehicle population by source type was adjusted from county-level using human population as a surrogate. Based on census data for human population distribution, DES assumed that the source type population within HA 212 is about 95 percent of the total source type population of Clark County. Table 3-5 lists the source type populations used in the model for the years 2017 and 2026.

Table 3-5. Clark County vehicle population within HA 212.

Source Type ID	Source Type Name	2017	2026
11	Motorcycle	40,367	48,316
21	Passenger Car	679,162	812,889
31	Passenger Truck	529,309	633,530
32	Light Commercial Truck	56,644	67,797
41	Other Buses	355	425
42	Transit Bus	797	856
43	School Bus	1,859	2,225
51	Refuse Truck	601	712
52	Single Unit Short-haul Truck	15,575	18,459
53	Single Unit Long-haul Truck	1,102	1,307
54	Motor Home	865	1,025
61	Combination Short-haul Truck	4,285	5,079
62	Combination Long-haul Truck	6,891	8,168
Total:		1,337,813	1,600,787

MOVES also requires input from hoteling activity, which refers to the hours spent idling by drivers of diesel long-haul combination trucks during mandatory rest periods. MOVES accounts for idling and auxiliary power unit (APU) use as separate emission processes, in addition to truck operation on roadways. Since no local specific hoteling hours are available, hoteling hours were based on MOVES4 default.

Ambient temperature and humidity data were based on the meteorological data collected at Harry Reid International Airport (LAS) in 2017. Table 3-6 presents the average hourly temperature and humidity data used in the MOVES database for July 2017.

Table 3-6. Average hourly temperature and humidity at McCarran International Airport for July 2017.

Hour	Temperature (F)	Humidity (%)
1	90.7	25.7
2	89.4	26.8
3	88.3	28.0
4	87.0	29.7
5	86.1	31.1
6	87.5	30.0
7	90.3	27.7
8	92.3	28.5
9	94.9	25.5
10	97.3	23.9
11	99.6	22.1
12	101.7	19.5
13	103.1	18.4
14	103.7	17.9
15	104.3	16.4
16	104.1	16.5
17	104.1	16.3
18	102.8	16.6
19	100.8	18.1
20	98.8	19.9
21	96.9	21.3
22	95.2	22.1
23	93.5	23.4
24	91.9	25.6

The DMV provided vehicle registration data for Clark County by model year and vehicle type, which DES used to generate the vehicle population and vehicle age distribution inputs. The age distributions for 2017 were based on the vehicle registration data from DMV for light-duty vehicle types; age distributions for heavy-duty vehicle types were exported from the MOVES3.1 default database. However, DES found a better source of data for age distribution from a national project conducted by the Coordinated Research Council (CRC). The project performed VIN decoding of 2017 county-specific registration data from IHS Markit, a global information services provider. The age distributions derived from the VIN-decoding project have been used by EPA in their 2016 modeling platform and 2017 NEI

development. EPA purchased the county-specific data from IHS Markit for the entire U.S. DES believes that the age distributions in the 2017 NEI are more robust and were therefore used in Clark County’s on-road inventory.

EPA recently developed an age distribution projection tool for the 2016v2 modeling platform that includes a new method to ensure the dip in light-duty vehicle sales during the 2008–09 recession is reflected for the same model years at a future time. In other words, the tool adjusts the age distributions of light-duty source types from the base year to future years. DES used this new age-distribution projection tool to adjust the light-duty source types from the base year of 2017 to the future year of 2026. The future-year age distributions for heavy-duty source types were kept the same as those in the base year of 2017, consistent with the assumption used in the 2016v2 modeling platform.

CRC also sponsored several projects aimed at improving the on-road portion of the NEI. Vehicle speed distribution is a crucial component of on-road emission inventories. For the Clark County 2017 MOVES database, the average vehicle speed distributions from 16 MOVES speed bins for each vehicle type were based on the CRC-sponsored project A-100, which used StreetLight Vehicle Telematics Data. DES used the same speed distributions for the future year of 2026, consistent with the assumption used in the 2016v2 modeling platform.

DES also used fuel parameters from the MOVES default database. Both gasoline and diesel sulfur levels are required to meet EPA requirements for low sulfur content as part of the Tier 2 standard (before 2017) or the Tier 3 standard (after 2017). Nevada caps the fuel Reid vapor pressure in Clark County at 9.0 pounds per square inch (psi), with a 1.0-psi waiver for ethanol-blended fuels.

Information regarding vehicle I/M programs is another important input for the MOVES model. In the Las Vegas Valley, the state I/M program requires an annual two-speed idle test for 1995 and older vehicles, and on-board diagnostics checks (exhaust and evaporative) for 1996 and newer vehicles. In the past, the I/M program exempted a new vehicle from emissions testing for the first 2 years. During the 2021 legislative session, Nevada Bill AB 349 changed the I/M grace period from 2 years to 3 years. DES incorporated this information into MOVES modeling using a 2-year grace period for 2017 and a 3-year grace period for 2026.

3.2 On-road Mobile Emissions Estimates

Table 3-7 shows HA 212 summer weekday on-road emission estimates for 2017 and 2026. Ramboll ran MOVES4 for a typical July weekday using meteorological data in Table 3-6 to represent typical summertime on-road NO_x and VOC emissions. Emission estimates for both ozone precursors significantly decrease from 2017 to 2026 due to fleet turnover with the implementation of stringent emissions control limits such as Tier 3 standards, which phase in starting in 2017.

Table 3-7. Clark County on-road mobile emissions in July (TPD) within HA 212.

Pollutant	2017	2026
VOC	24.81	14.60
NO _x	37.91	14.12

4.0 Nonroad Source Emissions

Nonroad mobile sources include a wide variety of motorized equipment types that either move under their own power off the roadway network or can be moved from site to site. The nonroad mobile source 2017 and 2026 emissions estimates were taken from the 2017 EMP and the 2016v3 EMP 2026 projections, respectively, which are based on the nonroad module of MOVES (EPA, 2020).

To develop HA 212 sub-county ozone season weekday emissions estimates, SMOKE was run for weekdays of a single week (Monday through Friday) in July (without a holiday) on a grid covering the nonattainment areas with 4 km grid spacing (Figure 2-1) using monthly nonroad emissions data by Source Classification Code (SCC) in the FF10 flat data file format. The total emission estimates within the modeling domain were summed for NO_x and VOC and averaged over all five weekdays. Several ancillary (e.g., cross-references) data files are required when running SMOKE. We used the ancillary files from respective EMPs. The resulting HA 212 nonroad emissions are provided by SCC in Appendix A. Table 4-1 shows July 2017 and 2026 average weekday total nonroad emissions within HA 212.

Table 4-1. Clark County nonroad emissions in July (TPD) within HA 212.

Pollutant	2017	2026
VOC	24.03	24.25
NO _x	36.98	19.10

5.0 Nonpoint Source Emissions

Nonpoint sources are stationary sources that fall below point source reporting levels and are too numerous or small to identify individually, e.g., small-scale industrial or residential operations that use emission-generating materials or processes. We accessed the 2017 and 2026 nonpoint emissions from the 2017 EMP and the 2016v3 EMP 2026 projections, respectively, to develop the Clark County ozone HA 212 inventory. The nonpoint source category includes locomotive, volatile chemical products (VCP), commercial combustion, asphalt paving, residential wood combustion, and other area sources. The 2016v3 EMP uses EPA’s new approach and data to derive emissions for VCP sources; the 2017 EMP and previous emissions inventories reported VCP emissions based on an older methodology. To obtain 2017 VCP estimates based on a consistent methodology, we linearly interpolated VCP emissions reported in the 2016v3 EMP between 2016 and 2023 instead of using emissions from the 2017 EMP. Table 5-1 provides a detailed overview of annual VOC emissions from VCP sources in Clark County for the years 2016, 2017 (interpolated), and 2026.

Table 5-1. Clark County VCP VOC emissions by SCC interpolated to 2017.

SCC	SCC Description	2016 (tons/year)	2023 (tons/year)	Interpolated 2017 (tons/year)
2401001000	Architectural Coatings	1733	1922	1760
2401005000	Auto Refinishing: SIC 7532	155	172	158
2401008000	Traffic Markings	298	331	303
2401015000	Factory Finished Wood: SIC 2426 thru 242	3	3	3
2401020000	Wood Furniture: SIC 25	43	48	44
2401025000	Metal Furniture: SIC 25	55	61	56
2401030000	Paper: SIC 26	0	0	0
2401055000	Machinery and Equipment: SIC 35	5	6	5
2401065000	Electronic and Other Electrical: SIC 36 - 363	16	18	17
2401070000	Motor Vehicles: SIC 371	6	6	6
2401075000	Aircraft: SIC 372	0	0	0
2401090000	Surface Coating: Miscellaneous Manufacturing	39	43	40
2401100000	Industrial Maintenance Coatings	526	583	534
2401200000	Other Special Purpose Coatings	244	271	248
2415000000	Degreasing: All Processes/All Industries	230	230	230
2420000000	Dry Cleaning	12	12	12
2425000000	Graphic Arts	792	878	804
2460030999	C&C: Lighter Fluid, Fire Starter, Other Fuels	47	52	48
2460100000	C&C: Personal Care Products	3143	3486	3192
2460200000	C&C: Household Products	2388	2648	2425
2460400000	C&C: Automotive Aftermarket Products	295	327	300
2460500000	C&C: Coatings and Related Products	2344	2599	2381
2460600000	C&C: Adhesives and Sealants	2077	2304	2110
2460800000	C&C: FIFRA Related Products	169	187	172
2460900000	C&C: Miscellaneous Products (Not Otherwise Covered)	40	44	40
2461021000	Cutback Asphalt	303	303	303
2461022000	Emulsified Asphalt	1226	1226	1226
2461850000	Pesticide Application: Agricultural	1	1	1
Total:		16,192	17,762	16,416

SMOKE was run on the HA 212 grid (Figure 2-1) for weekdays of a single week (Monday through Friday) in July (without a holiday) to generate ozone season weekday emission estimates using annual nonpoint emissions data by SCC in FF10 flat data file formats. The

total emission estimates within the modeling domain were summed for NO_x and VOC and averaged over all five weekdays. When running SMOKE, several ancillary (e.g., cross-references) data files are required. We used the ancillary data files from respective EMPs. The resulting HA 212 nonpoint emissions are provided by SCC in Appendix A. Table 5-2 shows July 2017 and 2026 average weekday total locomotive emissions⁵ within HA 212. Similarly, Table 5-3 shows July 2017 and 2026 average weekday emissions for other nonpoint sources, excluding locomotives, within HA 212.

Table 5-2. Clark County locomotive July weekday emissions (TPD) within HA 212.

Pollutant	2017	2026
VOC	0.04	0.03
NO _x	0.80	0.62

Table 5-3. Clark County nonpoint emissions in July (TPD) within HA 212.

Pollutant	2017	2026
VOC	57.72	61.69
NO _x	6.15	6.53

6.0 Point Source Emissions

Point sources are larger stationary sources that emit above mandatory reporting levels and must be permitted. Examples include power plants, industrial boilers, and various other industrial/commercial facilities. Clark County’s point source inventory includes all Title V stationary and all minor sources with the potential to emit at least 10 tons of VOCs or 25 tons of NO_x that are located within HA 212. Point source 2017 emissions inventories were obtained from 2017 annual reports submitted by individual stationary sources. Emissions for 2026 were estimated by extrapolating from the 2017 emissions using growth factors derived from the Technical Support Document of Second Maintenance Plan for the 1997 8-hour Ozone NAAQS (DES, 2021a). Point source emission inventories were developed from either data collected by direct on-site measurements or calculated using EPA emission factors and activity data. Emissions from all minor sources emitting less than 10 tons of VOCs or 25 tons of NO_x were included in the nonpoint source category.

Table 6-1 provides the overall NO_x and VOC point source emissions for 2017 and 2026. The resulting HA 212 point source emissions by individual unit are listed in Appendix B.

Table 6-1. Clark County point source emissions within HA 212 (tons per summer day).

Pollutant	2017	2026
VOC	1.25	1.35
NO _x	2.92	3.38

⁵ The SCC codes used to calculate the locomotive emissions are in provided in Appendix A, Table A1, page A-3.

7.0 Commercial Aviation

Commercial aviation within HA 212 covers emissions from three primary airports: Harry Reid (McCarran) International Airport, North Las Vegas Airport, and Henderson Executive Airport. The Clark County Department of Aviation (DOA) has provided emissions data for the year 2017, as well as projections for 2023 and 2032. These emission inventories were developed using the Federal Aviation Administration’s Aviation Environmental Design Tool (AEDT), Version 3b. The 2026 emissions were estimated by interpolating from 2023 and 2032 emissions data. DOA calculated design day emissions using the default meteorology in AEDT. The design day was in October, so DOA developed correction factors to account for the differences in meteorology between the design day and a typical summer weekday. These correction factors were applied to the emission inventories for all the airports. Table 7-1 presents 2017 and 2026 emissions for commercial aviation.

Table 7-1. Commercial aviation emissions (tons per summer day).

Airport	2017		2026	
	NOx	VOC	NOx	VOC
Harry Reid (McCarran) International Airport	10.95	1.11	12.75	1.14
North Las Vegas Airport	0.24	0.38	0.24	0.39
Henderson Executive Airport	0.21	0.21	0.24	0.23
Total	11.40	1.72	13.23	1.77

8.0 Federal Aviation

Federal aviation emissions within HA 212 primarily originate from Nellis Air Force Base. Table 8-1 presents 2017 actual and 2026 projected emissions from aircraft operations obtained from Clark County’s 1997 8-hour Ozone Second Maintenance Plan (DES, 2021a). The 2026 emissions were estimated by interpolating from the 2023 and 2033 emissions.

Table 8-1. Federal aviation emissions for 2017 (actual) and 2026 (projected).

Airport	2017		2026	
	NOx	VOC	NOx	VOC
Nellis Air Force Base	0.50	0.24	2.18	0.90
Air Force Training Project			0.49	0.08
Total	0.50	0.24	2.67	0.98

9.0 Banked Emission Reduction Credits (ERC)

Emission Reduction Credits (ERCs) may be granted, under strict guidelines, upon request by an emissions source that voluntarily reduces emissions beyond required levels of control. ERCs may be sold, leased, banked for future use, or traded in accordance with applicable regulations. When used to offset emissions, they are permanently retired. ERCs are intended to provide an incentive for reducing emissions and to establish a framework to

promote a market-based approach to regulating air pollution. Tables 9-1 and 9-2 outline the ERCs currently banked in Clark County for HA 212.

Table 9-1. ERC Balance for NOx within HA 212.

Owner ID – Name	ERC Balance
4 - CERTAIN TEED CORPORATION	16.5
3 - CHEMICAL LIME COMPANY	78.7
347 - MORGAN ADHESIVES COMPANY / MACTAC	1
99 - NEVADA READY MIX	60.4
477 - NV ENERGY	13.78
279 - SILVER STATE MATERIALS CORP.	9
19 - TITANIUM METALS CORP. (TIMET)	157.8
Total (TPY)	337.18
Total (TPD)	0.92

Table 9-2. ERC Balance for VOC within HA 212.

Owner ID – Name	ERC Balance
4 - CERTAIN TEED CORPORATION	0.13
347 - MORGAN ADHESIVES COMPANY / MACTAC	17.5
99 - NEVADA READY MIX	1.3
477 - NV ENERGY	0.08
279 - SILVER STATE MATERIALS CORP	0.7
Total (TPY)	19.71
Total (TPD)	0.05

10.0 Quality Assurance of Emissions

We performed thorough Quality Assurance (QA) and Quality Control (QC) checks of emissions following the procedures developed by WRAP (Adelman, 2004) for all source categories. We leveraged SMOKE’s advanced quality assurance features that include error logs when emissions are dropped or added during emissions processing. We carefully reviewed SMOKE log files for each processing stream and resolved any errors or critical warning messages before making a final SMOKE run. The QA activities of emissions data for each source category are described below.

For on-road mobile sources, most input datasets were generated from a locally specific vehicle study, and these datasets were carefully reviewed and checked. Some input datasets were submitted to EPA through the Emissions Inventory System (EIS), which includes several QA and QC checks. The MOVES model also includes internal checks and we made sure that all input datasets were properly imported into the MySQL database with all green checks showing before running the model. The output database was carefully reviewed, and we made sure there were no error messages. The emissions outcomes were reviewed and compared to other inventory data such as inventories from the NEI, different years, and other counties for reasonableness and consistency.

For nonroad and nonpoint sources, the primary data sources for the inventory were the 2017 Emissions Modeling platform (EMP) based on the 2017 NEI (EPA, 2022), and the 2016v3 EMP 2026 projections (EPA, 2023). EPA performed QA/QC checks on these datasets, and we thoroughly reviewed them. We used these inventories and the SMOKE modeling system for the 2016v3 platform without modification to develop emissions for HA 212. The emission outcomes were compared to those from NEI and other counties for reasonableness and consistency. The spatial distribution of emissions was checked with gridded emissions maps. Figures 10-1 and 10-2 illustrate the spatial distribution of NO_x and VOC emissions in both 2017 and 2026 for these sectors. The emissions maps consistently align with the distribution of population and housing density within HA 212, showcasing correct spatial allocation of emissions. The point source emission inventories submitted by facilities were checked by the DES compliance staff following procedures outlined in the Emissions Inventory Report Review and Audit Process (DES, 2021b).

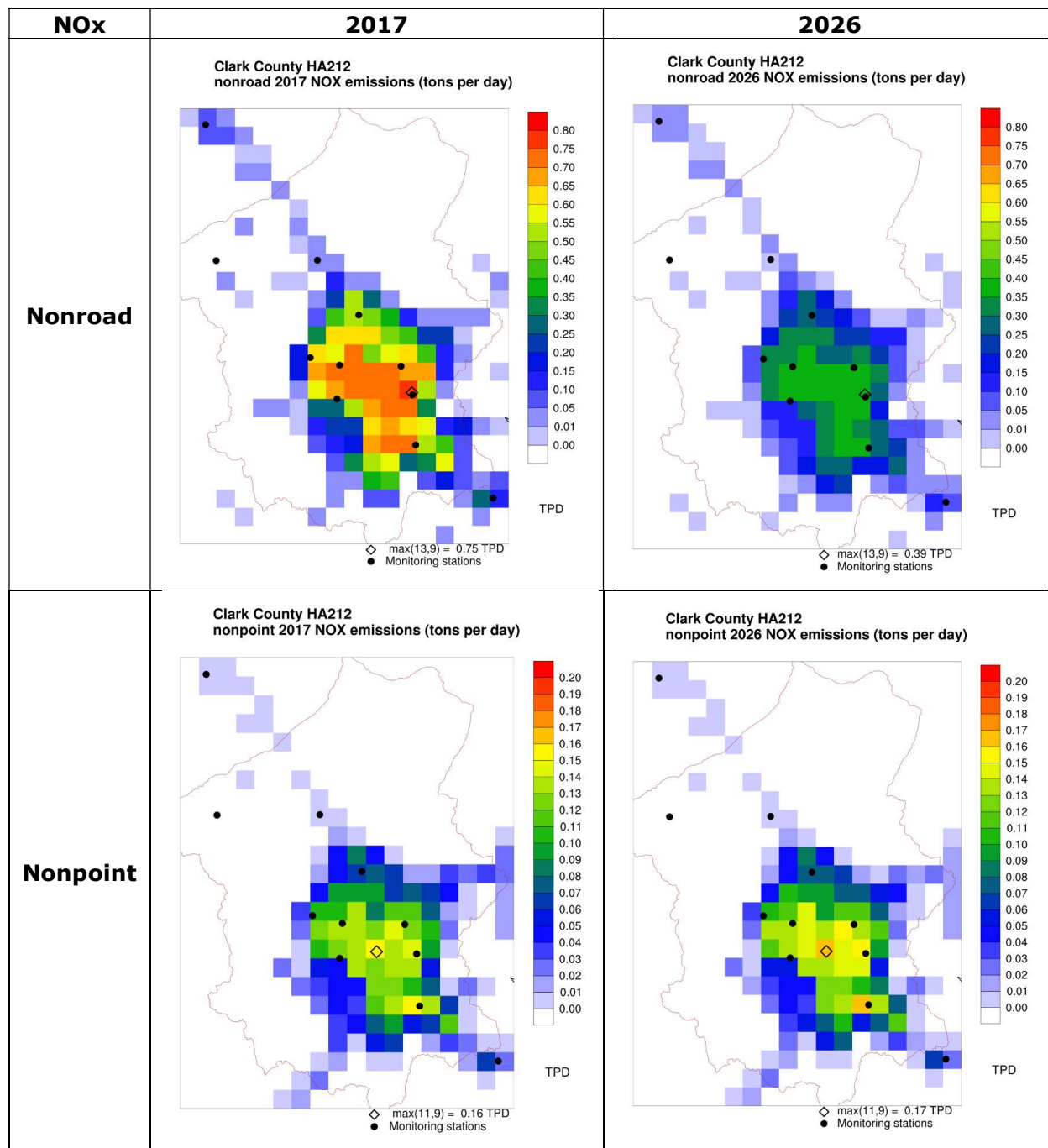


Figure 10-1. July weekday average NO_x emissions for nonroad (top row) and nonpoint (bottom row) sectors presented for the years 2017 (left column) and 2026 (right column).

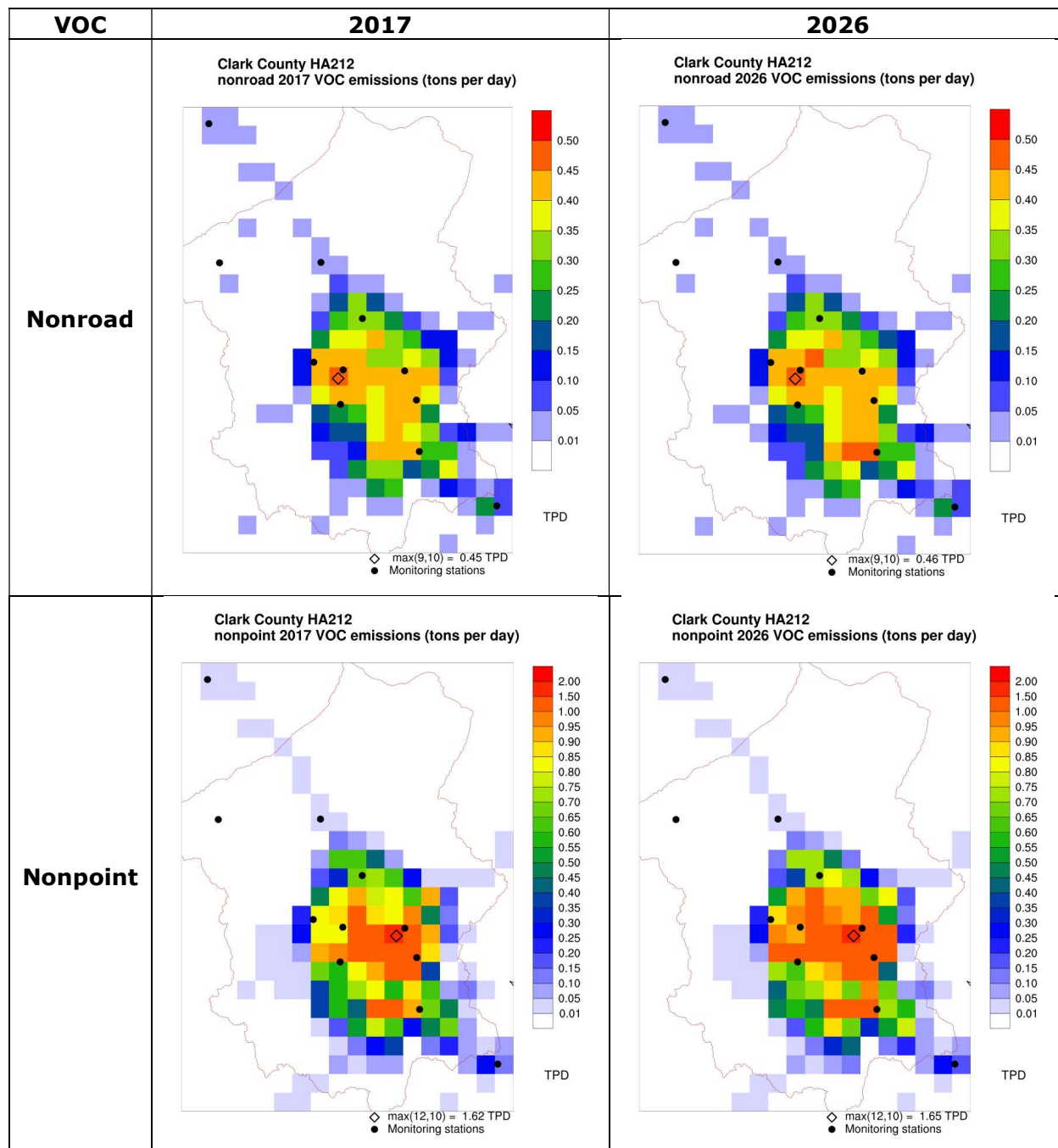


Figure 10-2 July weekday average VOC emissions for nonroad (top row) and nonpoint (bottom row) sectors presented for the years 2017 (left column) and 2026 (right column).

11.0 References

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Appendix A Clark County Nonattainment Area Nonpoint and Nonroad (Including Locomotive) Emissions by SCC

Appendix A Clark County Nonattainment Area Nonpoint and Nonroad (Including Locomotive) Emissions by SCC

Table A1. HA 212 ozone season weekday nonpoint (including locomotives) emissions by SCC.

SCC	SCC Description	2017 (TPD)		2026 (TPD)	
		NOX	VOC	NOX	VOC
2102002000	Stationary Source Fuel Combustion; Industrial; Bituminous/Subbituminous Coal; Total: All Boiler Types	0.2112	0.0010	0.1813	0.0008
2102004001	Stationary Source Fuel Combustion; Industrial; Distillate Oil; All Boiler Types	0.1089	0.0011	0.1366	0.0014
2102004002	Stationary Source Fuel Combustion; Industrial; Distillate Oil; All IC Engine Types	2.1933	0.1525	2.7510	0.1913
2102006000	Stationary Source Fuel Combustion; Industrial; Natural Gas; Total: Boilers and IC Engines	0.9840	0.0541	0.9923	0.0683
2102007000	Stationary Source Fuel Combustion; Industrial; Liquified Petroleum Gas (LPG); Total: All Boiler Types	0.0656	0.0024	0.0075	0.0003
2102008000	Stationary Source Fuel Combustion; Industrial; Wood; Total: All Boiler Types	0.0229	0.0018	0.0224	0.0017
2103004001	Stationary Source Fuel Combustion; Commercial/Institutional; Distillate Oil; Boilers	0.0007	<0.0001	0.0007	<0.0001
2103004002	Stationary Source Fuel Combustion; Commercial/Institutional; Distillate Oil; IC Engines	0.0011	0.0001	0.0011	0.0001
2103006000	Stationary Source Fuel Combustion; Commercial/Institutional; Natural Gas; Total: Boilers and IC Engines	1.9344	0.1064	1.8027	0.1158
2103007000	Stationary Source Fuel Combustion; Commercial/Institutional; Liquified Petroleum Gas (LPG); Total: All Combustor Types	0.0750	0.0027	0.0750	0.0027
2103008000	Stationary Source Fuel Combustion; Commercial/Institutional; Wood; Total: All Boiler Types	0.0373	0.0029	0.0372	0.0029
2103011000	Stationary Source Fuel Combustion; Commercial/Institutional; Kerosene; Total: All Combustor Types	0.0005	<0.0001	0.0005	<0.0001

2104004000	Stationary Source Fuel Combustion; Residential; Distillate Oil; Total: All Combustor Types	0.0002	<0.0001	0.0002	<0.0001
2104006000	Stationary Source Fuel Combustion; Residential; Natural Gas; Total: All Combustor Types	0.2233	0.0131	0.2233	0.0131
2104007000	Stationary Source Fuel Combustion; Residential; Liquified Petroleum Gas (LPG); Total: All Combustor Types	0.0065	0.0003	0.0065	0.0003
2104008610	Stationary Source Fuel Combustion; Residential; Wood; Hydronic heater: outdoor	0.0002	0.0068	0.0002	0.0069
2104008620	Stationary Source Fuel Combustion; Residential; Wood; Hydronic heater: indoor	0.0001	0.0043	0.0001	0.0044
2104008630	Stationary Source Fuel Combustion; Residential; Wood; Hydronic heater: pellet-fired	<0.0001	<0.0001	<0.0001	<0.0001
2104008700	Stationary Source Fuel Combustion; Residential; Wood; Outdoor wood burning device, NEC (fire-pits, chimneys, etc.)	0.0541	0.3934	0.0611	0.4438
2285002006	Mobile Sources; Railroad Equipment; Diesel; Line Haul Locomotives: Class I Operations	0.7936	0.0366	0.6131	0.0254
2285002007	Mobile Sources; Railroad Equipment; Diesel; Line Haul Locomotives: Class II / III Operations	0.0046	0.0002	0.0047	0.0002
2302002100	Industrial Processes; Food and Kindred Products: SIC 20; Commercial Cooking - Charbroiling; Conveyorized Charbroiling	--	0.0659	--	0.0781
2302002200	Industrial Processes; Food and Kindred Products: SIC 20; Commercial Cooking - Charbroiling; Under-fired Charbroiling	--	0.2243	--	0.2657
2302003000	Industrial Processes; Food and Kindred Products: SIC 20; Commercial Cooking - Frying; Deep Fat Frying	--	0.0472	--	0.0559
2302003100	Industrial Processes; Food and Kindred Products: SIC 20; Commercial Cooking - Frying; Flat Griddle Frying	--	0.0290	--	0.0344

2302003200	Industrial Processes; Food and Kindred Products: SIC 20; Commercial Cooking - Frying; Clamshell Griddle Frying	--	0.0015	--	0.0018
2401001000	Architectural Coatings	--	4.8222	--	5.3425
2401005000	Auto Refinishing: SIC 7532	--	0.4317	--	0.4822
2401008000	Traffic Markings	--	0.8299	--	0.7194
2401015000	Factory Finished Wood: SIC 2426 thru 242	--	0.0075	--	0.0088
2401020000	Wood Furniture: SIC 25	--	0.1210	--	0.1402
2401025000	Metal Furniture: SIC 25	--	0.1522	--	0.1763
2401030000	Paper: SIC 26	--	0.0008	--	0.0010
2401055000	Machinery and Equipment: SIC 35	--	0.0143	--	0.0165
2401065000	Electronic and Other Electrical: SIC 36 - 363	--	0.0458	--	0.0530
2401070000	Motor Vehicles: SIC 371	--	0.0161	--	0.0193
2401075000	Aircraft: SIC 372	--	0.0003	--	0.0004
2401090000	Surface Coating: Miscellaneous Manufacturing	--	0.1087	--	0.1266
2401100000	Industrial Maintenance Coatings	--	1.4639	--	1.7057
2401200000	Other Special Purpose Coatings	--	0.6791	--	0.7914
2415000000	Degreasing: All Processes/All Industries	--	0.6300	--	0.6256
2420000000	Dry Cleaning	--	0.0325	--	0.0326
2425000000	Graphic Arts	--	2.2024	--	2.5514
2460030999	C&C: Lighter Fluid, Fire Starter, Other Fuels	--	0.1308	--	0.1494
2460100000	C&C: Personal Care Products	--	8.7457	--	9.9864
2460200000	C&C: Household Products	--	6.6442	--	7.5867
2460400000	C&C: Automotive Aftermarket Products	--	0.8215	--	0.9380
2460500000	C&C: Coatings and Related Products	--	6.5223	--	7.4476
2460600000	C&C: Adhesives and Sealants	--	5.7803	--	6.6003
2460800000	C&C: FIFRA Related Products	--	0.4702	--	0.5369
2460900000	C&C: Miscellaneous Products (Not Otherwise Covered)	--	0.1100	--	0.1256
2461021000	Cutback Asphalt	--	0.8300	--	0.7767
2461022000	Emulsified Asphalt	--	3.3588	--	3.1428
2461850000	Pesticide Application: Agricultural	--	0.0037	--	0.0001

2501011011	Storage and Transport; Petroleum and Petroleum Product Storage; Residential Portable Gas Cans; Permeation	--	0.2020	--	0.2393
2501011012	Storage and Transport; Petroleum and Petroleum Product Storage; Residential Portable Gas Cans; Evaporation (includes Diurnal losses)	--	0.2267	--	0.2685
2501011013	Storage and Transport; Petroleum and Petroleum Product Storage; Residential Portable Gas Cans; Spillage During Transport	--	0.2808	--	0.3327
2501011014	Storage and Transport; Petroleum and Petroleum Product Storage; Residential Portable Gas Cans; Refilling at the Pump - Vapor Displacement	--	0.0577	--	0.0683
2501011015	Storage and Transport; Petroleum and Petroleum Product Storage; Residential Portable Gas Cans; Refilling at the Pump - Spillage	--	0.0083	--	0.0098
2501012011	Storage and Transport; Petroleum and Petroleum Product Storage; Commercial Portable Gas Cans; Permeation	--	0.0097	--	0.0115
2501012012	Storage and Transport; Petroleum and Petroleum Product Storage; Commercial Portable Gas Cans; Evaporation (includes Diurnal losses)	--	0.0080	--	0.0095
2501012013	Storage and Transport; Petroleum and Petroleum Product Storage; Commercial Portable Gas Cans; Spillage During Transport	--	0.5030	--	0.5960
2501012014	Storage and Transport; Petroleum and Petroleum Product Storage; Commercial Portable Gas Cans; Refilling at the Pump - Vapor Displacement	--	0.2181	--	0.2584
2501012015	Storage and Transport; Petroleum and Petroleum Product Storage; Commercial Portable Gas Cans; Refilling at the Pump - Spillage	--	0.0210	--	0.0249
2501050120	Storage and Transport; Petroleum and Petroleum Product Storage; Bulk Terminals: All Evaporative Losses; Gasoline	--	1.2891	--	1.0622

2501055120	Storage and Transport; Petroleum and Petroleum Product Storage; Bulk Plants: All Evaporative Losses; Gasoline	--	0.0003	--	0.0002
2501060051	Storage and Transport; Petroleum and Petroleum Product Storage; Gasoline Service Stations; Stage 1: Submerged Filling	--	5.5886	--	4.4738
2501060053	Storage and Transport; Petroleum and Petroleum Product Storage; Gasoline Service Stations; Stage 1: Balanced Submerged Filling	--	0.2157	--	0.1726
2501060201	Storage and Transport; Petroleum and Petroleum Product Storage; Gasoline Service Stations; Underground Tank: Breathing and Emptying	--	1.0519	--	0.8421
2501080050	Storage and Transport; Petroleum and Petroleum Product Storage; Airports : Aviation Gasoline; Stage 1: Total	--	0.3451	--	0.3320
2501080100	Storage and Transport; Petroleum and Petroleum Product Storage; Airports : Aviation Gasoline; Stage 2: Total	--	0.0004	--	0.0004
2505030120	Storage and Transport; Petroleum and Petroleum Product Transport; Truck; Gasoline	--	0.0706	--	0.0588
2505040120	Storage and Transport; Petroleum and Petroleum Product Transport; Pipeline; Gasoline	--	0.1018	--	0.0839
2610000500	Waste Disposal, Treatment, and Recovery; Open Burning; All Categories; Land Clearing Debris (use 28-10-005-000 for Logging Debris Burning)	0.1672	0.4723	0.1672	0.4723
2610030000	Waste Disposal, Treatment, and Recovery; Open Burning; Residential; Household Waste (use 26-10-000-xxx for Yard Wastes)	0.0188	0.0196	0.0188	0.0196
2630020000	Waste Disposal, Treatment, and Recovery; Wastewater Treatment; Public Owned; Total Processed	--	0.0757	--	0.0896
2680003000	Waste Disposal, Treatment, and Recovery; Composting; 100% Green Waste (e.g., residential or municipal yard wastes); All Processes	--	0.7757	--	0.7757

2805002000	Miscellaneous Area Sources; Agriculture Production - Livestock; Beef cattle production composite; Not Elsewhere Classified	--	0.0019	--	0.0019
2805007100	Miscellaneous Area Sources; Agriculture Production - Livestock; Poultry Waste; Poultry Production - Layers with Dry Manure Management Systems: Confinement	--	<0.0001	--	<0.0001
2805009100	Miscellaneous Area Sources; Agriculture Production - Livestock; Poultry production - broilers; Confinement	--	<0.0001	--	<0.0001
2805010100	Miscellaneous Area Sources; Agriculture Production - Livestock; Poultry production - turkeys; Confinement	--	<0.0001	--	<0.0001
2805018000	Miscellaneous Area Sources; Agriculture Production - Livestock; Dairy cattle composite; Not Elsewhere Classified	--	<0.0001	--	<0.0001
2805025000	Miscellaneous Area Sources; Agriculture Production - Livestock; Swine production composite; Not Elsewhere Classified (see also 28-05-039, -047, -053)	--	<0.0001	--	<0.0001
2805035000	Miscellaneous Area Sources; Agriculture Production - Livestock; Horses and Ponies Waste Emissions; Not Elsewhere Classified	--	0.0003	--	0.0003
2805040000	Miscellaneous Area Sources; Agriculture Production - Livestock; Sheep and Lambs Waste Emissions; Total	--	<0.0001	--	<0.0001
2805045000	Miscellaneous Area Sources; Agriculture Production - Livestock; Goats Waste Emissions; Not Elsewhere Classified	--	<0.0001	--	<0.0001
2810025000	Miscellaneous Area Sources; Other Combustion; Residential Grilling (see 23-02-002-xxx for Commercial); Total	0.0362	0.0960	0.0429	0.1138
2810060100	Miscellaneous Area Sources; Other Combustion; Cremation; Humans	0.0048	0.0004	0.0056	0.0005
2810060200	Miscellaneous Area Sources; Other Combustion; Cremation; Animals	<0.0001	<0.0001	<0.0001	<0.0001

Grand Total		6.9445	57.7641	7.1522	61.7171
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Table A2. HA 212 ozone season weekday nonroad emissions by SCC.

SCC	SCC Description	2017 (TPD)		2026 (TPD)	
		NOX	VOC	NOX	VOC
2260001022	Mobile Sources; Off-highway Vehicle Gasoline; Recreational Equipment; 2-Stroke Other Recreational Equip.	0.0057	0.4635	0.0067	0.3685
2260001060	Mobile Sources; Off-highway Vehicle Gasoline; Recreational Equipment; 2-Stroke Specialty Vehicles/Carts	0.0047	0.0271	0.0046	0.0310
2260002022	Mobile Sources; Off-highway Vehicle Gasoline; Construction Equipment; 2-Stroke Construction Equipment	0.049	1.9073	0.0560	2.1973
2260003022	Mobile Sources; Off-highway Vehicle Gasoline; Industrial Equipment; 2-Stroke Industrial Equipment	<0.0001	0.0006	0.0000	0.0008
2260004020	Mobile Sources; Off-highway Vehicle Gasoline; Lawn and Garden Equipment; 2-Stroke Chain Saws < 6 HP (Residential)	0.0049	0.1831	0.0053	0.2005
2260004021	Mobile Sources; Off-highway Vehicle Gasoline; Lawn and Garden Equipment; 2-Stroke Chain Saws < 6 HP (Commercial)	0.0525	2.3689	0.0573	2.5877
2260004022	Mobile Sources; Off-highway Vehicle Gasoline; Lawn and Garden Equipment; 2-Stroke Mowers, Tractors, Turf Eq (Commercial)	<0.0001	0.0006	0.0000	0.0006
2260004033	Mobile Sources; Off-highway Vehicle Gasoline; Lawn and Garden Equipment; 2-Stroke Lawn & Garden Eq (Residential)	0.0185	0.5695	0.0202	0.6636
2260004044	Mobile Sources; Off-highway Vehicle Gasoline; Lawn and Garden Equipment; 2-Stroke Lawn & Garden Eq (Commercial)	0.1494	3.9788	0.1631	4.3529

2260005022	Mobile Sources; Off-highway Vehicle Gasoline; Agricultural Equipment; 2-Stroke Agriculture Equipment	<0.0001	<0.0001	0.0000	0.0000
2260006022	Mobile Sources; Off-highway Vehicle Gasoline; Commercial Equipment; 2-Stroke Commercial Equipment	0.0039	0.1111	0.0049	0.1402
2265001022	Mobile Sources; Off-highway Vehicle Gasoline; Recreational Equipment; 4-Stroke Other Recreational Equip.	0.017	0.2305	0.0172	0.2437
2265001050	Mobile Sources; Off-highway Vehicle Gasoline; Recreational Equipment; 4-Stroke Golf Carts	0.0292	0.105	0.0324	0.1175
2265001060	Mobile Sources; Off-highway Vehicle Gasoline; Recreational Equipment; 4-Stroke Specialty Vehicles/Carts	0.0062	0.0287	0.0044	0.0209
2265002022	Mobile Sources; Off-highway Vehicle Gasoline; Construction Equipment; 4-Stroke Construction Equipment	0.2899	1.1038	0.2781	1.2427
2265003022	Mobile Sources; Off-highway Vehicle Gasoline; Industrial Equipment; 4-Stroke Industrial Equipment	0.0147	0.0237	0.0170	0.0311
2265003060	Mobile Sources; Off-highway Vehicle Gasoline; Industrial Equipment; 4-Stroke AC\Refrigeration	0.0002	0.0008	0.0003	0.0012
2265004022	Mobile Sources; Off-highway Vehicle Gasoline; Lawn and Garden Equipment; 4-Stroke Mowers, Tractors, Turf Eq (Commercial)	0.8958	3.3743	0.9860	3.7585
2265004033	Mobile Sources; Off-highway Vehicle Gasoline; Lawn and Garden Equipment; 4-Stroke Lawn & Garden Eq (Residential)	0.2817	2.5117	0.2760	2.7444
2265004044	Mobile Sources; Off-highway Vehicle Gasoline; Lawn and Garden Equipment; 4-Stroke Lawn & Garden Eq (Commercial)	0.4767	2.8519	0.4828	3.0363

2265005022	Mobile Sources; Off-highway Vehicle Gasoline; Agricultural Equipment; 4-Stroke Agriculture Equipment	<0.0001	<0.0001	0.0000	0.0000
2265006022	Mobile Sources; Off-highway Vehicle Gasoline; Commercial Equipment; 4-Stroke Commercial Equipment	0.1635	0.9646	0.1855	1.2445
2267001060	Mobile Sources; Off-highway Vehicle LPG; Recreational Equipment; LPG Specialty Vehicles/Carts	0.0014	0.0003	0.0008	0.0002
2267002022	Mobile Sources; Off-highway Vehicle LPG; Construction Equipment; LPG Construction Equipment	0.0846	0.0169	0.0461	0.0069
2267003022	Mobile Sources; Off-highway Vehicle LPG; Industrial Equipment; LPG Industrial Equipment	0.1184	0.0179	0.1344	0.0158
2267004044	Mobile Sources; Off-highway Vehicle LPG; Lawn and Garden Equipment; LPG Lawn & Garden Eq (Commercial)	0.016	0.0024	0.0142	0.0017
2267005022	Mobile Sources; Off-highway Vehicle LPG; Agricultural Equipment; LPG Agriculture Equipment	<0.0001	<0.0001	0.0000	0.0000
2267006022	Mobile Sources; Off-highway Vehicle LPG; Commercial Equipment; LPG Commercial Equipment	0.0524	0.0086	0.0295	0.0043
2268002022	Mobile Sources; Off-highway Vehicle CNG; Construction Equipment; CNG Construction Equipment	0.0005	0.0004	0.0002	0.0001
2268003022	Mobile Sources; Off-highway Vehicle CNG; Industrial Equipment; CNG Industrial Equipment	0.0092	0.0049	0.0108	0.0046
2268003060	Mobile Sources; Off-highway Vehicle CNG; Industrial Equipment; CNG AC\Refrigeration	0.0001	<0.0001	0.0001	0.0000
2268005022	Mobile Sources; Off-highway Vehicle CNG; Agricultural Equipment; CNG Agriculture Equipment	<0.0001	<0.0001	0.0000	0.0000

2268006022	Mobile Sources; Off-highway Vehicle CNG; Commercial Equipment; CNG Commercial Equipment	0.0232	0.0128	0.0181	0.0093
2270001060	Mobile Sources; Off-highway Vehicle Diesel; Recreational Equipment; Specialty Vehicles/Carts	0.0157	0.0036	0.0106	0.0018
2270002022	Mobile Sources; Off-highway Vehicle Diesel; Construction Equipment; Diesel Construction Equipment	31.6988	2.9074	14.3430	1.0884
2270003022	Mobile Sources; Off-highway Vehicle Diesel; Industrial Equipment; Diesel Industrial Equipment	0.1188	0.0079	0.0718	0.0029
2270003060	Mobile Sources; Off-highway Vehicle Diesel; Industrial Equipment; AC\Refrigeration	0.3474	0.0202	0.4231	0.0135
2270004022	Mobile Sources; Off-highway Vehicle Diesel; Lawn and Garden Equipment; Diesel Mowers, Tractors, Turf Eqt (Commercial)	0.1441	0.0137	0.1230	0.0099
2270004044	Mobile Sources; Off-highway Vehicle Diesel; Lawn and Garden Equipment; Diesel Lawn & Garden Eqt (Commercial)	1.302	0.1214	0.8370	0.0623
2270005022	Mobile Sources; Off-highway Vehicle Diesel; Agricultural Equipment; Diesel Agriculture Equipment	0.0005	<0.0001	0.0002	0.0000
2270006022	Mobile Sources; Off-highway Vehicle Diesel; Commercial Equipment; Diesel Commercial Equipment	0.5754	0.0664	0.4288	0.0355
2282005022	Mobile Sources; Pleasure Craft; Gasoline; 2-Stroke Pleasure Craft	0.0022	0.0157	0.0024	0.0070
2282010005	Mobile Sources; Pleasure Craft; Gasoline 4-Stroke; Inboard/Sterndrive	0.0015	0.0024	0.0007	0.0016
2282020022	Mobile Sources; Pleasure Craft; Diesel; Diesel Pleasure Craft	0.0014	0.0001	0.0012	0.0001
2285002015	Mobile Sources; Railroad Equipment; Diesel; Railway Maintenance	0.0059	0.001	0.0034	0.0005

2285004015	Mobile Sources; Railroad Equipment; Gasoline, 4-Stroke; Railway Maintenance	0.0001	0.0004	0.0001	0.0005
2285006015	Mobile Sources; Railroad Equipment; LPG; Railway Maintenance	<0.0001	<0.0001	0.0000	0.0000
Grand Total		36.9831	24.0299	19.0976	24.2507

Appendix B Clark County Nonattainment Area Unit-level Point Source Emissions

Appendix B Clark County Nonattainment Area Unit-level Point Source Emissions

Table B1. HA 212 unit-level point source NOx emissions for 2017 and 2026.

Facility Name	Description	Facility ID	Emission Unit ID	SCC	Summer Proportion (%)	2017 Actual TPY	2017 TPD	2017 summer TPD	2026 TPY	2026 TPD	2026 summer TPD	2016-2026 Per year Growth Factor	Source
Certain Teed Gypsum	Generator	4	4-L4	20200401	27	0.36	0.001	0.001	0.3620	0.0010	0.0011	0.0000	2016 v.1
Certain Teed Gypsum	Generator	4	B8	20200401	27	0.92	0.003	0.003	0.9240	0.0025	0.0027	0.0000	2016 v.1
Certain Teed Gypsum	Continuous Calciner	4	4-G1	30501511	25	5.02	0.014	0.014	5.5622	0.0152	0.0152	0.0120	2016 v.1
Certain Teed Gypsum	Impact Mill	4	4-E11	30501513	25	3.82	0.010	0.010	4.2326	0.0116	0.0116	0.0120	2016 v.1
Certain Teed Gypsum	Dryer	4	4-J3	30501520	25	1.31	0.004	0.004	1.4515	0.0040	0.0040	0.0120	2016 v.1
NV Energy (Clark Station)	Turbine	7	4	20100201	25	8.33	0.023	0.023	8.3550	0.0229	0.0229	0.0004	2016 v.1
NV Energy (Clark Station)	Turbine	7	5	20100201	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	6	20100201	25	2.80	0.008	0.008	3.2057	0.0088	0.0088	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	7	20100201	25	0.51	0.001	0.001	0.5839	0.0016	0.0016	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	8	20100201	25	0.75	0.002	0.002	0.8587	0.0024	0.0024	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	27	20100201	25	2.43	0.007	0.007	2.7821	0.0076	0.0076	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	28	20100201	25	3.32	0.009	0.009	3.8011	0.0104	0.0104	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	29	20100201	25	5.63	0.015	0.015	6.4458	0.0177	0.0177	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	30	20100201	25	3.90	0.011	0.011	4.4651	0.0122	0.0122	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	31	20100201	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	32	20100201	25	3.13	0.009	0.009	3.5835	0.0098	0.0098	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	33	20100201	25	3.05	0.008	0.008	3.4919	0.0096	0.0096	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	34	20100201	25	5.14	0.014	0.014	5.8848	0.0161	0.0161	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	35	20100201	25	0.70	0.002	0.002	0.8014	0.0022	0.0022	0.0161	2016 v.1

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NV Energy (Clark Station)	Turbine	7	36	20100201	25	2.02	0.006	0.006	2.3127	0.0063	0.0063	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	37	20100201	25	0.07	0.000	0.000	0.0801	0.0002	0.0002	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	38	20100201	25	4.96	0.014	0.014	5.6787	0.0156	0.0156	0.0161	2016 v.1
NV Energy (Clark Station)	Generator	7	21	20200102	25	0.45	0.001	0.001	0.5152	0.0014	0.0014	0.0161	2016 v.1
NV Energy (Clark Station)	Generator	7	22	20200102	25	1.76	0.005	0.005	2.0150	0.0055	0.0055	0.0161	2016 v.1
NV Energy (Clark Station)	Generator	7	45	20200102	25	19.90	0.055	0.055	22.7835	0.0624	0.0624	0.0161	2016 v.1
NV Energy (Clark Station)	Generator	7	46	20200102	25	2.85	0.008	0.008	3.2630	0.0089	0.0089	0.0161	2016 v.1
Olin Chlor Alkali Products	Generator	9	1	20200102	25	7.53	0.021	0.021	8.6211	0.0236	0.0236	0.0161	2016 v.1
Viawest Lone Mountain Data Center	Generator	12	2	20300101	25	4.52	0.012	0.012	5.1749	0.0142	0.0142	0.0161	2016 v.1
Wells Cargo	Asphalt Oil Heater	12	1	30500206	25	0.90	0.002	0.002	1.0304	0.0028	0.0028	0.0161	2016 v.1
Kinder Morgan	Diesel Pump	13	D02	20200102	25	4.18	0.011	0.011	4.7857	0.0131	0.0131	0.0161	2016 v.1
Kinder Morgan	Flare Processing	13	B10	30600904	25	1.26	0.003	0.003	1.4426	0.0040	0.0040	0.0161	2016 v.1
Kinder Morgan	Thermal Oxidizer	13	SR04	50410312	25	0.89	0.002	0.002	1.0190	0.0028	0.0028	0.0161	2016 v.1
Titanium Metals Corp.	Steam Generator	19	B09	10200602	25	1.42	0.004	0.004	1.6258	0.0045	0.0045	0.0161	2016 v.1
Titanium Metals Corp.	CO Burner/Boiler	19	B06	10201402	25	0.67	0.002	0.002	0.7671	0.0021	0.0021	0.0161	2016 v.1
Titanium Metals Corp.	Hot Oil Heater	19	C05	30301201	25	17.45	0.048	0.048	19.9785	0.0547	0.0547	0.0161	2016 v.1
Titanium Metals Corp.	Generator	19	E03	30301202	25	2.13	0.006	0.006	2.4386	0.0067	0.0067	0.0161	2016 v.1
Titanium Metals Corp.	Fugitives	19	A01	30301299	25	0.10	0.000	0.000	0.1145	0.0003	0.0003	0.0161	2016 v.1
Titanium Metals Corp.	Thermal Oxidizer	19	B10	30301299	25	40.26	0.110	0.110	46.0937	0.1263	0.1263	0.0161	2016 v.1
Northwind Alladin	Boiler	26	1	10300603	25	7.81	0.021	0.021	8.9417	0.0245	0.0245	0.0161	2016 v.1
Circus Circus Hotel and Casino	Boiler	47	1	10300603	25	0.83	0.002	0.002	0.9503	0.0026	0.0026	0.0161	2016 v.1
CCWRD Flamingo Center	Boiler	54	1	10300603	25	2.07	0.006	0.006	2.3699	0.0065	0.0065	0.0161	2016 v.1
BKEP Materials	Boiler	67	1	10300603	25	7.45	0.020	0.020	8.5295	0.0234	0.0234	0.0161	2016 v.1
Las Vegas Paving - Blue Diamond	Drum Mixer	70	B12	30500257	25	8.84	0.024	0.024	10.1209	0.0277	0.0277	0.0161	2016 v.1

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Golden Nugget Hotel and Casino	Boiler	81	1	10300603	25	2.94	0.008	0.008	3.3660	0.0092	0.0092	0.0161	2016 v.1
Horseshoe Club	Boiler	85	1	10300603	25	0.91	0.002	0.002	1.0419	0.0029	0.0029	0.0161	2016 v.1
Tronox	Boiler	95	A10	10300602	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0161	2016 v.1
Tronox	Boiler	95	A15	10300602	25	0.06	0.000	0.000	0.0687	0.0002	0.0002	0.0161	2016 v.1
Treasure Island	Boiler	95	A01	10300603	25	22.77	0.062	0.062	26.0694	0.0714	0.0714	0.0161	2016 v.1
Tronox	Generator	95	A02	20300101	25	4.24	0.012	0.012	4.8544	0.0133	0.0133	0.0161	2016 v.1
Tronox	Generator	95	A03	20300101	25	4.12	0.011	0.011	4.7170	0.0129	0.0129	0.0161	2016 v.1
Tronox	Generator	95	A04	20300101	25	6.00	0.016	0.016	6.8694	0.0188	0.0188	0.0161	2016 v.1
Tronox	Generator	95	A07	20300101	25	1.61	0.004	0.004	1.8433	0.0051	0.0051	0.0161	2016 v.1
Tronox	Chem. Manufacturing	95	A05	30107002	25	1.58	0.004	0.004	1.8089	0.0050	0.0050	0.0161	2016 v.1
Westgate Las Vegas	Generator	101	B	20100102	25	2.16	0.006	0.006	2.4730	0.0068	0.0068	0.0161	2016 v.1
West Rock	Printing Press	101	G	40500501	25	2.79	0.008	0.008	3.1943	0.0088	0.0088	0.0161	2016 v.1
Las Vegas Paving - 5th Street	Fire Pump	104	H01	20200102	25	4.34	0.012	0.012	4.9689	0.0136	0.0136	0.0161	2016 v.1
Las Vegas Paving - 5th Street	Drum Mixer	104	E01	30500205	25	1.27	0.003	0.003	1.4540	0.0040	0.0040	0.0161	2016 v.1
Las Vegas Paving - 5th Street	Oil Heater	104	E02	30500206	25	5.36	0.015	0.015	6.1367	0.0168	0.0168	0.0161	2016 v.1
Las Vegas Paving - 5th Street	Drum Dryer	104	E03	39001089	25	13.75	0.038	0.038	15.7424	0.0431	0.0431	0.0161	2016 v.1
Las Vegas Paving - Lone Mountain	Generator	105	C	20200102	25	3.10	0.008	0.008	3.5492	0.0097	0.0097	0.0161	2016 v.1
Las Vegas Paving - Lone Mountain	Drum Dryer	105	B012	30500205	25	33.23	0.091	0.091	33.2300	0.0910	0.0910	0.0000	2016 v.1
Las Vegas Paving - Lone Mountain	Oil Heater	105	B011	30500209	25	4.01	0.011	0.011	4.0100	0.0110	0.0110	0.0000	2016 v.1
McCarran International Airport	Boiler	108	A	10300602	25	0.38	0.001	0.001	0.3800	0.0010	0.0010	0.0000	2016 v.1
McCarran International Airport	Generator	108	E	20200102	25	0.10	0.000	0.000	0.1000	0.0003	0.0003	0.0000	2016 v.1
Nellis AFB	Nat gas boilers	114	RB-C	10300602	51	0.04	0.000	0.000	0.0400	0.0001	0.0002	0.0000	2016 v.1
Nellis AFB	Internal Combustion	114	G	20300301	51	0.08	0.000	0.000	0.0800	0.0002	0.0004	0.0000	2016 v.1
Nellis AFB	Hush House	114	N	20400110	25	0.33	0.001	0.001	0.3300	0.0009	0.0009	0.0000	2016 v.1
Nellis AFB	Drum Mixer	114	A047	30500205	25	0.03	0.000	0.000	0.0300	0.0001	0.0001	0.0000	2016 v.1
SLS Las Vegas	Boiler	133	A	10300602	25	0.06	0.000	0.000	0.0600	0.0002	0.0002	0.0000	2016 v.1

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SLS Las Vegas	Generator	133	B	20300101	27	0.06	0.000	0.000	0.0610	0.0002	0.0002	0.0000	2016 v.1
University Medical Center	Boiler	142	B	10300603	27	0.08	0.000	0.000	0.0790	0.0002	0.0002	0.0000	2016 v.1
Univeral Urethane	Spray painting booths	142	A	40202201	25	0.27	0.001	0.001	0.2700	0.0007	0.0007	0.0000	2016 v.1
Las Vegas Paving	Drum Mixer	186	B013	30500205	25	4.90	0.013	0.013	4.9000	0.0134	0.0134	0.0000	2016 v.1
Las Vegas Paving	Oil Heater	186	B023	30500208	51	5.33	0.015	0.030	7.0425	0.0193	0.0394	0.0357	2016 v.1
Caesars Consolidated	Boiler	257	1	10300603	51	2.00	0.005	0.011	2.6426	0.0072	0.0148	0.0357	2016 v.1
Mirage/Treasure Island	Boiler	282	1	10300603	51	2.75	0.008	0.015	3.6336	0.0100	0.0203	0.0357	2016 v.1
Brady Linen Services	Dryer	322	1	30504033	51	2.72	0.007	0.015	3.5939	0.0098	0.0201	0.0357	2016 v.1
Catalina Plastic and Coating	Plastics	323	1	40201399	51	2.86	0.008	0.016	3.7789	0.0104	0.0211	0.0357	2016 v.1
Las Vegas Cogeneration	Generator	329	10	20100102	25	6.21	0.017	0.017	8.2053	0.0225	0.0225	0.0357	2016 v.1
Las Vegas Cogeneration	Generator	329	11	20100102	37	6.73	0.018	0.027	7.2224	0.0198	0.0293	0.0081	ERTAC
Las Vegas Cogeneration	Turbine	329	1	20100201	37	5.10	0.014	0.021	5.3284	0.0146	0.0216	0.0050	ERTAC
Las Vegas Cogeneration	Turbine	329	3	20100201	37	4.06	0.011	0.016	4.3723	0.0120	0.0177	0.0085	ERTAC
Las Vegas Cogeneration	Turbine	329	4	20100201	27	8.70	0.024	0.026	11.4953	0.0315	0.0340	0.0357	2016 v.1
Las Vegas Cogeneration	Turbine	329	5	20100201	27	10.20	0.028	0.030	13.4773	0.0369	0.0399	0.0357	2016 v.1 2023; IPM 2016-2030
Las Vegas Cogeneration	Turbine	329	6	20100201	27	10.40	0.028	0.031	13.7415	0.0376	0.0407	0.0357	2016 v.1 2023; IPM 2016-2030
Boral Roofing	Curing Tunnel	346	B18	30500850	27	7.90	0.022	0.023	10.4383	0.0286	0.0309	0.0357	2016 v.1 2023; IPM 2016-2030
Aggregate Industries	Boiler	372	6	10300602	27	11.20	0.031	0.033	14.7986	0.0405	0.0438	0.0357	2016 v.1 2023; IPM 2016-2030
Aggregate Industries	Boiler	372	10	10300602	27	2.95	0.008	0.009	3.6875	0.0101	0.0109	0.0278	ERTAC
Aggregate Industries	Generator	372	1	20100102	27	4.68	0.013	0.014	4.6800	0.0128	0.0138	0.0000	ERTAC
Aggregate Industries	Generator	372	9	20100102	27	3.24	0.009	0.010	3.8739	0.0106	0.0115	0.0217	ERTAC
Aggregate Industries	Mineral Products	372	2	30500208	27	5.33	0.015	0.016	6.4721	0.0177	0.0192	0.0238	ERTAC
Aggregate Industries	Mineral Products	372	5	30500208	27	3.39	0.009	0.010	3.8322	0.0105	0.0113	0.0145	ERTAC

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Aggregate Industries	Mineral Products	372	3	30500242	27	3.70	0.010	0.011	4.5763	0.0125	0.0135	0.0263	ERTAC
Saguaro Power Company	Boiler	393	5	10100601	27	3.22	0.009	0.010	3.5127	0.0096	0.0104	0.0101	ERTAC
Saguaro Power Company	Boiler	393	6	10100602	27	4.25	0.012	0.013	5.0227	0.0138	0.0149	0.0202	ERTAC
Saguaro Power Company	Starter	393	3	20100102	27	3.13	0.009	0.009	3.5383	0.0097	0.0105	0.0145	ERTAC
Saguaro Power Company	Starter	393	4	20100102	27	4.19	0.011	0.012	5.2830	0.0145	0.0156	0.0290	ERTAC
Saguaro Power Company	Turbine	393	1	20100201	27	3.08	0.008	0.009	3.6235	0.0099	0.0107	0.0196	ERTAC
Saguaro Power Company	Turbine	393	2	20100201	27	3.25	0.009	0.010	3.9464	0.0108	0.0117	0.0238	ERTAC
City of Las Vegas WPCF	Generator	402	2	20200102	27	51.92	0.142	0.154	68.6072	0.1880	0.2030	0.0357	2016 v.1*
City of Las Vegas WPCF	Generator	402	3	20200202	27	49.45	0.135	0.146	65.3436	0.1790	0.1933	0.0357	2016 v.1*
City of Las Vegas WPCF	Waste Flare	402	5	50100789	25	0.02	0.000	0.000	0.0243	0.0001	0.0001	0.0238	2016 v.1
City of Las Vegas WPCF	Blower Engines	402	6	50100799	25	1.01	0.003	0.003	1.2263	0.0034	0.0034	0.0238	2016 v.1
City of Las Vegas WPCF	Boilers	402	7	50100799	25	0.07	0.000	0.000	0.0850	0.0002	0.0002	0.0238	2016 v.1
Nikkiso Cryo	Generator	404	1	20200102	25	7.70	0.021	0.021	9.3493	0.0256	0.0256	0.0238	2016 v.1
Nevada Sun Peak Partnerships	Turbine	423	1	20100201	25	0.06	0.000	0.000	0.0729	0.0002	0.0002	0.0238	2016 v.1
Nevada Sun Peak Partnerships	Turbine	423	2	20100201	25	44.93	0.123	0.123	54.5540	0.1495	0.1495	0.0238	2016 v.1
Nevada Sun Peak Partnerships	Turbine	423	3	20100201	25	4.69	0.013	0.013	5.6946	0.0156	0.0156	0.0238	2016 v.1
Hard Rock Hotel and Casino	Boiler	510	A	10300603	25	8.90	0.024	0.024	10.8064	0.0296	0.0296	0.0238	2016 v.1
Hard Rock Hotel and Casino	Generator	510	B	20300101	27	0.01	0.000	0.000	0.0121	0.0000	0.0000	0.0238	2016 v.1
Texas Station Casino	Boiler	531	A	10300603	27	0.01	0.000	0.000	0.0121	0.0000	0.0000	0.0238	2016 v.1
Texas Station Casino	Generator	531	B	20300101	27	0.01	0.000	0.000	0.0121	0.0000	0.0000	0.0238	2016 v.1
Citibank The Lakes	Generator	546	A	20300101	27	0.01	0.000	0.000	0.0121	0.0000	0.0000	0.0238	2016 v.1
Rio All Suites Hotel and Casino	Boiler	555	A	10300603	25	0.86	0.002	0.002	1.0442	0.0029	0.0029	0.0238	2016 v.1
Rio All Suites Hotel and Casino	Generator	555	C	20300101	25	0.01	0.000	0.000	0.0121	0.0000	0.0000	0.0238	2016 v.1
Kurt Segler Water Reclamation	Generator	558	B	20200102	25	0.10	0.000	0.000	0.0932	0.0003	0.0003	-0.0076	2016 v.1

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Kurt Segler Water Reclamation	Waste water treatment	558	B01	50100765	25	1.67	0.005	0.005	1.9255	0.0053	0.0053	0.0170	2016 v.1
Stratosphere Hotel and Casino	Boiler	564	A	10300603	25	0.03	0.000	0.000	0.0346	0.0001	0.0001	0.0170	2016 v.1
Stratosphere Hotel and Casino	Generator	564	B	20300101	25	0.71	0.002	0.002	0.8499	0.0023	0.0023	0.0219	2016 v.1
Aggregate Industries - Gowan	Drum Mixer	587	A08	30500205	25	1.05	0.003	0.003	1.2570	0.0034	0.0034	0.0219	2016 v.1
Aggregate Industries - Gowan	Asphalt Oil Heater	587	E	30500208	25	0.09	0.000	0.000	0.1077	0.0003	0.0003	0.0219	2016 v.1
Aggregate Industries - Gowan	Asphalt Silos	587	A12	30500212	25	73.04	0.200	0.200	87.436 2	0.2396	0.2396	0.0219	2016 v.1
Las Vegas Review Journal	Generator	588	D	20300101	25	0.98	0.003	0.003	1.1732	0.0032	0.0032	0.0219	2016 v.1
Las Vegas Review Journal	Parts Washer	588	B	40500417	25	0.47	0.001	0.001	0.5626	0.0015	0.0015	0.0219	2016 v.1
Berry Plastics Corporation	Generator	597	F01	20300101	25	0.52	0.001	0.001	0.6225	0.0017	0.0017	0.0219	2016 v.1
Berry Plastics Corporation	Offset Printing	597	E01	40500802	25	2.05	0.006	0.006	2.4541	0.0067	0.0067	0.0219	2016 v.1
Palace Station Hotel and Casino	Boiler	605	A	10300603	25	0.28	0.001	0.001	0.3352	0.0009	0.0009	0.0219	2016 v.1
Palace Station Hotel and Casino	Generator	605	B	20300101	25	1.09	0.003	0.003	1.3048	0.0036	0.0036	0.0219	2016 v.1
Gold Coast Hotel and Casino	Boiler	606	A	10300603	25	2.47	0.007	0.007	2.9568	0.0081	0.0081	0.0219	2016 v.1
Gold Coast Hotel and Casino	Generator	606	B	20300101	25	0.21	0.001	0.001	0.2514	0.0007	0.0007	0.0219	2016 v.1
Sams Town Hotel and Casino	Boiler	616	A	10300603	25	11.35	0.031	0.031	13.587 1	0.0372	0.0372	0.0219	2016 v.1
Sams Town Hotel and Casino	Generator	616	B	20300101	25	0.11	0.000	0.000	0.1317	0.0004	0.0004	0.0219	2016 v.1
Santa Fe Station	Boiler	621	A	10300603	25	1.07	0.003	0.003	1.2809	0.0035	0.0035	0.0219	2016 v.1
Santa Fe Station	Generator	621	B	20300101	25	0.45	0.001	0.001	0.5387	0.0015	0.0015	0.0219	2016 v.1
University Medical Center	Generator	634	B	20300101	25	0.81	0.002	0.002	0.9697	0.0027	0.0027	0.0219	2016 v.1
University of Nevada, Las Vegas	Generator	634	A	20300101	25	0.40	0.001	0.001	0.4788	0.0013	0.0013	0.0219	2016 v.1
Orleans Hotel and Casino	Boiler	641	A	10300603	25	1.35	0.004	0.004	1.6161	0.0044	0.0044	0.0219	2016 v.1
Orleans Hotel and Casino	Generator	641	B	20300101	25	0.77	0.002	0.002	0.9218	0.0025	0.0025	0.0219	2016 v.1
University of Nevada, Las Vegas	Boiler	697	C	10300603	25	18.60	0.051	0.051	22.266 1	0.0610	0.0610	0.0219	2016 v.1

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Venetian Hotel and Casino	Generator	697	B	20300101	25	1.26	0.003	0.003	1.5083	0.0041	0.0041	0.0219	2016 v.1
Venetian Hotel and Casino	Boiler	726	A	10300603	25	0.58	0.002	0.002	0.6943	0.0019	0.0019	0.0219	2016 v.1
Nevada Color Litho	Printing Press	754	A05	40500433	25	0.54	0.001	0.001	0.6464	0.0018	0.0018	0.0219	2016 v.1
JW Marriott Las Vegas	Boiler	755	A	10300603	25	0.38	0.001	0.001	0.4549	0.0012	0.0012	0.0219	2016 v.1
JW Marriott Las Vegas	Generator	755	B	20300101	25	1.73	0.005	0.005	2.0710	0.0057	0.0057	0.0219	2016 v.1
Suncoast Hotel and Casino	Boiler	775	A	10300603	25	0.23	0.001	0.001	0.2753	0.0008	0.0008	0.0219	2016 v.1
Suncoast Hotel and Casino	Generator	775	B	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0219	2016 v.1
Veterans Administration	Generator	777	A	20300101	25	1.64	0.004	0.004	1.9632	0.0054	0.0054	0.0219	2016 v.1
Cancun Resort	Boiler	788	A	10300603	25	0.03	0.000	0.000	0.0359	0.0001	0.0001	0.0219	2016 v.1
Cancun Resort	Generator	788	B	20300101	25	0.74	0.002	0.002	0.8859	0.0024	0.0024	0.0219	2016 v.1
Clearwater Paper	Boiler	807	A10	10200602	25	0.55	0.002	0.002	0.6584	0.0018	0.0018	0.0219	2016 v.1
Clearwater Paper	Air heaters	807	A08	30790003	25	0.29	0.001	0.001	0.3472	0.0010	0.0010	0.0219	2016 v.1
Clearwater Paper	Paper process fugitives	807	F	30799998	25	0.79	0.002	0.002	0.9457	0.0026	0.0026	0.0219	2016 v.1
MGM Grand/New York New York	Boiler	825	A	10300603	25	1.24	0.003	0.003	1.4844	0.0041	0.0041	0.0219	2016 v.1
MGM Grand/New York New York	Turbine	825	E	20100201	25	5.23	0.014	0.014	6.2608	0.0172	0.0172	0.0219	2016 v.1
MGM Grand/New York New York	Generator	825	B	20300101	25	1.06	0.003	0.003	1.2689	0.0035	0.0035	0.0219	2016 v.1
MGM Grand/New York New York	Paint booth	825	C	40201101	25	0.35	0.001	0.001	0.4190	0.0011	0.0011	0.0219	2016 v.1
MGM Grand/New York New York	Tank	825	D	40600401	25	1.83	0.005	0.005	2.1907	0.0060	0.0060	0.0219	2016 v.1
UNEV Pipeline	Generator	859	A	20200102	25	3.34	0.009	0.009	3.9983	0.0110	0.0110	0.0219	2016 v.1
Univeral Urethane	Molding machines	859	B	30800802	25	0.47	0.001	0.001	0.5626	0.0015	0.0015	0.0219	2016 v.1
Sunset Station	Boiler	869	A	10300603	25	0.32	0.001	0.001	0.3831	0.0010	0.0010	0.0219	2016 v.1
Sunset Station	Generator	869	B	20300101	25	0.04	0.000	0.000	0.0479	0.0001	0.0001	0.0219	2016 v.1
Wynn Las Vegas	Boiler	974	A	10300602	25	0.10	0.000	0.000	0.1197	0.0003	0.0003	0.0219	2016 v.1
Wells Cargo Lone Mountain	Engines	1055	A	20300101	25	0.10	0.000	0.000	0.1197	0.0003	0.0003	0.0219	2016 v.1
Republic Services Transfer Station	Boiler	1087	B	10300603	25	0.37	0.001	0.001	0.4429	0.0012	0.0012	0.0219	2016 v.1

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Republic Services Transfer Station	Generator	1087	G	20300101	25	2.76	0.008	0.008	3.3040	0.0091	0.0091	0.0219	2016 v.1
Las Vegas Color Graphics	Printing Press	1149	A	40500411	25	2.21	0.006	0.006	2.6456	0.0072	0.0072	0.0219	2016 v.1
St Rose Dominican Siena	Boiler	1500	A	10300603	25	4.09	0.011	0.011	4.8961	0.0134	0.0134	0.0219	2016 v.1
St Rose Dominican Siena	Generator	1500	B	20300101	25	0.96	0.003	0.003	1.1492	0.0031	0.0031	0.0219	2016 v.1
Green Valley Ranch Resort	Boiler	1501	A	10300603	25	2.86	0.008	0.008	3.4237	0.0094	0.0094	0.0219	2016 v.1
Green Valley Ranch Resort	Generator	1501	B	20300101	25	1.11	0.003	0.003	1.3288	0.0036	0.0036	0.0219	2016 v.1
Palms Casino Resort	Boiler	1522	A	10300603	25	0.40	0.001	0.001	0.4788	0.0013	0.0013	0.0219	2016 v.1
Palms Casino Resort	Generator	1522	B	20300101	25	39.42	0.108	0.108	47.1897	0.1293	0.1293	0.0219	2016 v.1
Boulder Station Hotel and Casino	Boiler	1524	A	10300603	25	2.59	0.007	0.007	3.1005	0.0085	0.0085	0.0219	2016 v.1
Boulder Station Hotel and Casino	Generator	1524	B	20300101	25	4.77	0.013	0.013	4.8602	0.0133	0.0133	0.0021	2016 v.1
Mountain View Hospital	Boiler	1569	A	10300603	25	5.92	0.016	0.016	7.4065	0.0203	0.0203	0.0279	2016 v.1
Mountain View Hospital	Generator	1569	B	20300101	25	9.18	0.025	0.025	10.1880	0.0279	0.0279	0.0122	2016 v.1
Lasfue! McCarran Tank Farm	Generator	1589	C	20300101	25	1.20	0.003	0.003	1.2000	0.0033	0.0033	0.0000	2016 v.1
Lasfue! McCarran Tank Farm	Thermal Oxidizer	1589	B06	40400153	25	0.06	0.000	0.000	0.0600	0.0002	0.0002	0.0000	default value
Wynn Las Vegas	Generator	1624	A	20100102	25	1.07	0.003	0.003	1.0700	0.0029	0.0029	0.0000	default value
World Market Center	Generator	1624	F	20300101	25	0.01	0.000	0.000	0.0050	0.0000	0.0000	0.0000	2016 v.1
Wynn Las Vegas	Dry Cleaning	1624	R	40100103	25	12.41	0.034	0.034	12.4050	0.0340	0.0340	0.0000	2016 v.1
Wynn Las Vegas	AST	1624	C	40600306	25	0.10	0.000	0.000	0.1000	0.0003	0.0003	0.0000	2016 v.1
North Las Vegas Airport	Generator	9596	C	20100102	25	5.12	0.014	0.014	5.1200	0.0140	0.0140	0.0000	2016 v.1
Henderson Executive Airport	Generator	9603	B	20100102	25	1.63	0.004	0.004	1.6300	0.0045	0.0045	0.0000	2016 v.1
Brady Linen Services	Boiler	10201	B	10200602	25	4.15	0.011	0.011	4.1500	0.0114	0.0114	0.0000	2016 v.1
Brady Linen Services	Dryer	10201	D	41000130	25	5.71	0.016	0.016	5.7100	0.0156	0.0156	0.0000	2016 v.1
Republic Services (Sunrise)	Flare	15033	1	50300601	25	0.23	0.001	0.001	0.2300	0.0006	0.0006	0.0000	2016 v.1
CPP Acquisition	Dryer	15193	D	40500101	25	0.59	0.002	0.002	0.5900	0.0016	0.0016	0.0000	2016 v.1

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CPP Acquisition	Printer	15193	P	40500401	25	0.62	0.002	0.002	0.6200	0.0017	0.0017	0.0000	2016 v.1
McCarran Rent a Car Center	Boiler	15409	A	10300603	25	0.23	0.001	0.001	0.2300	0.0006	0.0006	0.0000	2016 v.1
McCarran Rent a Car Center	Generator	15409	B	20100102	25	0.01	0.000	0.000	0.0100	0.0000	0.0000	0.0000	2016 v.1
Metl Span	Panel manufacturing	15422	A01	30800802	25	1.13	0.003	0.003	1.1300	0.0031	0.0031	0.0000	2016 v.1
Artesian Spas	Spray booth with RTO	15426	A01	30800724	25	0.23	0.001	0.001	0.2300	0.0006	0.0006	0.0000	2016 v.1
Red Rock Casino Resort	Boiler	15487	A	10300602	25	0.31	0.001	0.001	0.3100	0.0008	0.0008	0.0000	default value
Red Rock Casino Resort	Generator	15487	B	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
South Point Hotel and Casino	Boiler	15515	A	10300602	25	0.23	0.001	0.001	0.2300	0.0006	0.0006	0.0000	2016 v.1
South Point Hotel and Casino	Generator	15515	B	20300101	25	2.98	0.008	0.008	2.9800	0.0082	0.0082	0.0000	2016 v.1
World Market Center	Boiler	15541	B	10300602	25	7.12	0.020	0.020	7.1200	0.0195	0.0195	0.0000	2016 v.1
Westgate Las Vegas	Boiler	15541	A	10300603	25	0.29	0.001	0.001	0.2900	0.0008	0.0008	0.0000	2016 v.1
CDW Logistics	Generator	15634	A	20300101	25	1.87	0.005	0.005	1.8700	0.0051	0.0051	0.0000	default value
Manheim Nevada	Generator	15839	C	20100102	25	7.45	0.020	0.020	7.4500	0.0204	0.0204	0.0000	2016 v.1
Manheim Nevada	Heater	15839	B	40201001	25	11.53	0.032	0.032	11.5300	0.0316	0.0316	0.0000	2016 v.1
City of Henderson Downtown	Boiler	15847	B	10300603	25	1.14	0.003	0.003	1.1400	0.0031	0.0031	0.0000	default value
City of Henderson Downtown	Generator	15847	G	20300101	25	0.11	0.000	0.000	0.1100	0.0003	0.0003	0.0000	default value
Centennial Hills Hospital	Boiler	15873	A	10300602	25	26.74	0.073	0.073	26.7400	0.0733	0.0733	0.0000	2016 v.1
Centennial Hills Hospital	Generator	15873	C	20300101	25	0.03	0.000	0.000	0.0300	0.0001	0.0001	0.0000	2016 v.1
Plasticard Locktech	Heater	15876	B	10300603	25	33.83	0.093	0.093	33.8300	0.0917	0.0917	-0.0012	2016 v.1
Plasticard Locktech	Press	15876	A	40202201	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
Veterans Administration	Boiler	15970	B	10300602	25	0.10	0.000	0.000	0.1000	0.0003	0.0003	0.0000	default value
Verizon Business	Generator	15970	A	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
2755 Las Vegas	Boiler	15999	A	10300602	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
2755 Las Vegas	Generator	15999	B	20300101	25	1.00	0.003	0.003	1.0000	0.0027	0.0027	0.0000	default value

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Cosmopolitan Las Vegas	Boiler	16101	A	10300602	25	0.18	0.000	0.000	0.1800	0.0005	0.0005	0.0000	default value
Cosmopolitan Las Vegas	Generator	16101	B	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
Biodiesel of Las Vegas	Fire Pump	16118	C01	20200102	25	0.04	0.000	0.000	0.0400	0.0001	0.0001	0.0000	default value
Ritchie Brothers	Generator	16172	G	20300101	25	4.68	0.013	0.013	4.8527	0.0133	0.0133	0.0041	2016 v.1
Switch	Generator	16258	B	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
Beltway Complex	Generator	16290	A	20300101	25	2.34	0.006	0.006	2.3400	0.0064	0.0064	0.0000	2016 v.1
Erickson International	RTO	16295	C	30190013	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
Erickson International	Dryer	16295	B	40200101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
GE Transport	Parts Washer	16300	A	40201501	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
Switch Communications	Generator	16304	A	20022102	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
Pro Terminal Operators	Loading Rack	16376	A07	40400150	25	0.07	0.000	0.000	0.0700	0.0002	0.0002	0.0000	default value
Treasure Island	Generator	16452	A	20300101	25	0.08	0.000	0.000	0.0800	0.0002	0.0002	0.0000	default value
Clark County Downtown Campus	Boiler	16665	A	10300603	25	12.87	0.035	0.035	11.8860	0.0326	0.0326	-0.0085	2016 v.1
Clark County Downtown Campus	Generator	16665	B	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
CTC Crushing	Generator	16673	B	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	2016 v.1
Freeman	Generator	16684	B	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	2016 v.1
Terra Firma Organics	Generator	16706	B	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	2016 v.1
Resorts World	Boiler	16925	B	10300602	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	2016 v.1
Resorts World	Generator	16925	A	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	2016 v.1
Preferred Laminations	Surface Coating	17220	A	40202501	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
Viawest	Generator	17272	A	20300101	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	default value
Blue Diamond Hill Gypsum	Engines	17286	C	20300101	25	18.94	0.052	0.052	18.9400	0.0519	0.0519	0.0000	2016 v.1
Blue Diamond Hill Gypsum	Blasting	17286	A001	30504001	25	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	2016 v.1
Shelby American	Heater	17347	A03	39990003	25	5.74	0.016	0.016	5.7400	0.0157	0.0157	0.0000	2016 v.1
NBC Fourth Realty	Generator	17439	A	20301001	25	13.05	0.036	0.036	13.0500	0.0358	0.0358	0.0000	2016 v.1

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Wells Cargo	Drum Mixer	17749	C02	30500257	25	3.91	0.011	0.011	3.9140	0.010	0.0107	0.0000	2016 v.1
Wells Cargo Lone Mountain	Blasting	17749	B	30504001	25	4.68	0.013	0.013	4.6800	0.0128	0.0128	0.0000	default value
Progress Rail	Parts Washer	17918	A01	10300603	25	0.23	0.001	0.001	0.2300	0.0006	0.0006	0.0000	2016 v.1
Total						1027.43	2.81	2.92	1183.63	3.24	3.38		

Table B2. HA 212 unit-level point source VOC emissions for 2017 and 2026.

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Facility Name	Description	Facility ID	Emission Unit ID	SCC	Summer Proportion (%)	2017 Actual TPY	2017 TPD	2017 summer TPD	2026 TPY	2026 TPD	2026 summer TPD	2016-2026 Per year Growth Factor	Source
Certain Teed Gypsum	Generator	4	B8	20200401	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	default value
Certain Teed Gypsum	Generator	4	4-L4	20200401	25	0.190	0.0005	0.0005	0.1900	0.0005	0.0005	0.0000	default value
Certain Teed Gypsum	Grinder	4	4-F1	30501502	25	0.310	0.0008	0.0008	0.3549	0.0010	0.0010	0.0161	2016 v.1
Certain Teed Gypsum	Continuous Calciner	4	4-G1	30501511	25	0.100	0.0003	0.0003	0.1145	0.0003	0.0003	0.0161	2016 v.1
Certain Teed Gypsum	Impact Mill	4	4-E11	30501513	25	0.290	0.0008	0.0008	0.3320	0.0009	0.0009	0.0161	2016 v.1
Certain Teed Gypsum	Dryer	4	4-J3	30501520	25	0.700	0.0019	0.0019	0.8014	0.0022	0.0022	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	27	20100201	27	0.260	0.0007	0.0008	0.2977	0.0008	0.0009	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	35	20100201	27	0.300	0.0008	0.0009	0.3435	0.0009	0.0010	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	38	20100201	27	0.300	0.0008	0.0009	0.3435	0.0009	0.0010	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	37	20100201	27	0.320	0.0009	0.0009	0.3664	0.0010	0.0011	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	33	20100201	27	0.330	0.0009	0.0010	0.3778	0.0010	0.0011	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	29	20100201	27	0.340	0.0009	0.0010	0.3893	0.0011	0.0012	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	36	20100201	27	0.360	0.0010	0.0011	0.4122	0.0011	0.0012	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	31	20100201	27	0.390	0.0011	0.0012	0.4465	0.0012	0.0013	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	28	20100201	27	0.440	0.0012	0.0013	0.5038	0.0014	0.0015	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	32	20100201	27	0.440	0.0012	0.0013	0.5038	0.0014	0.0015	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	34	20100201	27	0.470	0.0013	0.0014	0.5381	0.0015	0.0016	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	4	20100201	27	0.520	0.0014	0.0015	0.5953	0.0016	0.0018	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	30	20100201	27	0.540	0.0015	0.0016	0.6182	0.0017	0.0018	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	7	20100201	27	1.830	0.0050	0.0054	2.0952	0.0057	0.0062	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	5	20100201	27	2.290	0.0063	0.0068	2.6218	0.0072	0.0078	0.0161	2016 v.1

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NV Energy (Clark Station)	Turbine	7	8	20100201	27	2.440	0.0067	0.0072	2.7936	0.0077	0.0083	0.0161	2016 v.1
NV Energy (Clark Station)	Turbine	7	6	20100201	27	2.530	0.0069	0.0075	2.8966	0.0079	0.0086	0.0161	2016 v.1
NV Energy (Clark Station)	Generator	7	21	20200102	27	0.010	0.0000	0.0000	0.0114	0.0000	0.0000	0.0161	2016 v.1
NV Energy (Clark Station)	Generator	7	45	20200102	27	0.010	0.0000	0.0000	0.0114	0.0000	0.0000	0.0161	2016 v.1
Olin Chlor Alkali Products	Generator	9	1	20200102	25	0.290	0.0008	0.0008	0.3320	0.0009	0.0009	0.0161	2016 v.1
Wells Cargo	Asphalt Oil Heater	12	2	30500206	25	0.030	0.0001	0.0001	0.0343	0.0001	0.0001	0.0161	2016 v.1
Wells Cargo	Drum Mixer	12	1	30500257	25	8.760	0.0240	0.0240	10.0293	0.0275	0.0275	0.0161	2016 v.1
Wells Cargo	Fugitives	12	3	30500298	25	5.360	0.0147	0.0147	6.1367	0.0168	0.0168	0.0161	2016 v.1
Kinder Morgan	Diesel Pump	13	D02	20200102	25	0.005	0.0000	0.0000	0.0057	0.0000	0.0000	0.0161	2016 v.1
Kinder Morgan	Flare Processing	13	B10	30600904	25	0.028	0.0001	0.0001	0.0321	0.0001	0.0001	0.0161	2016 v.1
Kinder Morgan	Thermal Oxidizer	13	SR04	50410312	25	59.300	0.1625	0.1625	67.8926	0.1860	0.1860	0.0161	2016 v.1
Titanium Metals Corp.	CO Burner/Boiler	19	B06	10201402	25	0.170	0.0005	0.0005	0.1946	0.0005	0.0005	0.0161	2016 v.1
Titanium Metals Corp.	Hot Oil Heater	19	C05	30301201	25	0.059	0.0002	0.0002	0.0675	0.0002	0.0002	0.0161	2016 v.1
Titanium Metals Corp.	Fugitives	19	A01	30301299	25	2.141	0.0059	0.0059	2.4512	0.0067	0.0067	0.0161	2016 v.1
Northwind Alladin	Boiler	26	1	10300603	25	0.210	0.0006	0.0006	0.2100	0.0006	0.0006	0.0000	default value
Circus Circus Hotel and Casino	Boiler	47	1	10300603	25	0.610	0.0017	0.0017	0.6100	0.0017	0.0017	0.0000	2016 v.1
CCWRD Flamingo Center	Boiler	54	1	10300603	25	3.390	0.0093	0.0093	3.3900	0.0093	0.0093	0.0000	2016 v.1
BKEP Materials	Boiler	67	1	10300603	25	0.720	0.0020	0.0020	0.7200	0.0020	0.0020	0.0000	2016 v.1
Las Vegas Paving - Blue Diamond	Drum Mixer	70	B12	30500257	25	4.970	0.0136	0.0136	4.9700	0.0136	0.0136	0.0000	2016 v.1
Golden Nugget Hotel and Casino	Boiler	81	1	10300603	25	0.150	0.0004	0.0004	0.1500	0.0004	0.0004	0.0000	2016 v.1
Horseshoe Club	Boiler	85	1	10300603	25	0.960	0.0026	0.0026	0.9600	0.0026	0.0026	0.0000	2016 v.1
Tronox	Boiler	95	A07	10300602	25	0.040	0.0001	0.0001	0.0400	0.0001	0.0001	0.0000	2016 v.1
Tronox	Boiler	95	A05	10300602	25	0.930	0.0025	0.0025	0.9300	0.0025	0.0025	0.0000	2016 v.1
Tronox	Generator	95	A01	20300101	25	0.001	0.0000	0.0000	0.0010	0.0000	0.0000	0.0000	2016 v.1
Tronox	Generator	95	A02	20300101	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	2016 v.1

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Tronox	Generator	95	A03	20300101	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	2016 v.1
Tronox	Generator	95	A04	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	2016 v.1
Tronox	Chem. Manufacturing	95	A15	30107002	25	0.070	0.0002	0.0002	0.0700	0.0002	0.0002	0.0000	2016 v.1
Tronox	Chem. Manufacturing	95	A10	30107002	25	0.330	0.0009	0.0009	0.3300	0.0009	0.0009	0.0000	2016 v.1
Westgate Las Vegas	Boiler	101	B	10300603	25	0.580	0.0016	0.0016	0.5800	0.0016	0.0016	0.0000	2016 v.1
Westgate Las Vegas	Generator	101	G	20100102	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	2016 v.1
Las Vegas Paving - 5th Street	Fire Pump	104	E02	20200102	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	2016 v.1
Las Vegas Paving - 5th Street	Drum Mixer	104	E01	30500205	25	5.190	0.0142	0.0142	5.1900	0.0142	0.0142	0.0000	2016 v.1
Las Vegas Paving - 5th Street	Oil Heater	104	H01	30500206	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	2016 v.1
Las Vegas Paving - 5th Street	Asphalt Silos	104	B19	30500213	25	2.110	0.0058	0.0058	2.1100	0.0058	0.0058	0.0000	2016 v.1
Las Vegas Paving - 5th Street	Truck Loadout	104	B17	30500214	25	0.680	0.0019	0.0019	0.6800	0.0019	0.0019	0.0000	2016 v.1
Las Vegas Paving - 5th Street	Drum Dryer	104	E03	39001089	25	0.520	0.0014	0.0014	0.5200	0.0014	0.0014	0.0000	2016 v.1
Las Vegas Paving - 5th Street	UST	104	G01	40600706	25	0.140	0.0004	0.0004	0.1400	0.0004	0.0004	0.0000	2016 v.1
Las Vegas Paving - Lone Mountain	Generator	105	C	20200102	25	1.690	0.0046	0.0046	1.6900	0.0046	0.0046	0.0000	2016 v.1
Las Vegas Paving - Lone Mountain	Drum Dryer	105	B012	30500205	25	3.320	0.0091	0.0091	3.3200	0.0091	0.0091	0.0000	2016 v.1
Las Vegas Paving - Lone Mountain	Oil Heater	105	B011	30500209	25	0.020	0.0001	0.0001	0.0264	0.0001	0.0001	0.0357	2016 v.1
Las Vegas Paving - Lone Mountain	Asphalt Silos	105	B013	30500213	25	0.080	0.0002	0.0002	0.1057	0.0003	0.0003	0.0357	2016 v.1
McCarran International Airport	Boiler	108	A	10300602	25	0.800	0.0022	0.0022	1.0570	0.0029	0.0029	0.0357	2016 v.1
McCarran International Airport	Generator	108	E	20200102	25	0.140	0.0004	0.0004	0.1850	0.0005	0.0005	0.0357	2016 v.1
McCarran International Airport	Paint Booth	108	S01	40201101	25	0.170	0.0005	0.0005	0.2246	0.0006	0.0006	0.0357	2016 v.1
McCarran International Airport	AST	108	W01	40600401	25	0.190	0.0005	0.0005	0.2510	0.0007	0.0007	0.0357	2016 v.1
Nellis AFB	Nat gas boilers	114	RB-C	10300602	25	0.400	0.0011	0.0011	0.5285	0.0014	0.0014	0.0357	2016 v.1
Nellis AFB	Internal Combustion	114	G	20300301	25	0.310	0.0008	0.0008	0.1767	0.0005	0.0005	-0.0478	IPM
Nellis AFB	Hush House	114	N	20400110	25	0.530	0.0015	0.0015	0.0353	0.0001	0.0001	-0.1037	IPM

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Nellis AFB	Misc Chemicals	114	O	24600000	25	6.140	0.0168	0.0168	8.1128	0.0222	0.0222	0.0357	2016 v.1
Nellis AFB	Drum Mixer	114	A047	30500205	25	0.120	0.0003	0.0003	0.1586	0.0004	0.0004	0.0357	2016 v.1
Nellis AFB	Degreasers	114	M	40100336	25	0.080	0.0002	0.0002	0.1057	0.0003	0.0003	0.0357	2016 v.1
Nellis AFB	Surface coating	114	D	40202501	25	1.400	0.0038	0.0038	1.8498	0.0051	0.0051	0.0357	2016 v.1
Nellis AFB	Fuel dispensing	114	J	40688801	25	5.300	0.0145	0.0145	7.0029	0.0192	0.0192	0.0357	2016 v.1
SLS Las Vegas	Boiler	133	A	10300602	25	0.250	0.0007	0.0007	0.0901	0.0002	0.0002	-0.0711	IPM
SLS Las Vegas	Generator	133	B	20300101	25	0.050	0.0001	0.0001	0.0179	0.0000	0.0000	-0.0714	IPM
University Medical Center	Boiler	142	A	10300603	25	0.410	0.0011	0.0011	0.5417	0.0015	0.0015	0.0357	2016 v.1
University Medical Center	Generator	142	B	20300101	25	0.080	0.0002	0.0002	0.1057	0.0003	0.0003	0.0357	2016 v.1
Las Vegas Paving	Drum Mixer	186	B013	30500205	25	2.040	0.0056	0.0056	2.6955	0.0074	0.0074	0.0357	2016 v.1
Las Vegas Paving	Oil Heater	186	B023	30500208	25	0.010	0.0000	0.0000	0.0132	0.0000	0.0000	0.0357	2016 v.1
Las Vegas Paving	Waste Silo	186	B017	30500213	25	0.060	0.0002	0.0002	0.0793	0.0002	0.0002	0.0357	2016 v.1
Las Vegas Paving	Truck Loadout	186	B020	30500214	25	0.260	0.0007	0.0007	0.3435	0.0009	0.0009	0.0357	2016 v.1
Caesars Consolidated	Boiler	257	1	10300603	25	2.000	0.0055	0.0055	2.6426	0.0072	0.0072	0.0357	2016 v.1
Mirage/Treasure Island	Boiler	282	1	10300603	25	1.010	0.0028	0.0028	1.3345	0.0037	0.0037	0.0357	2016 v.1
Brady Linen Services	Dryer	322	1	30504033	25	1.480	0.0041	0.0041	1.9555	0.0054	0.0054	0.0357	2016 v.1
Catalina Plastic and Coating	Plastics	323	1	40201399	25	11.130	0.0305	0.0305	14.7061	0.0403	0.0403	0.0357	2016 v.1
Las Vegas Cogeneration	Generator	329	10	20100102	51	0.010	0.0000	0.0001	0.0132	0.0000	0.0001	0.0357	2016 v.1
Las Vegas Cogeneration	Generator	329	11	20100102	51	0.020	0.0001	0.0001	0.0264	0.0001	0.0001	0.0357	2016 v.1
Las Vegas Cogeneration	Turbine	329	1	20100201	51	0.680	0.0019	0.0038	0.8985	0.0025	0.0050	0.0357	2016 v.1
Las Vegas Cogeneration	Turbine	329	3	20100201	51	0.980	0.0027	0.0055	1.2949	0.0035	0.0072	0.0357	2016 v.1
Las Vegas Cogeneration	Turbine	329	5	20100201	51	1.340	0.0037	0.0075	1.7705	0.0049	0.0099	0.0357	2016 v.1
Las Vegas Cogeneration	Turbine	329	6	20100201	51	1.350	0.0037	0.0075	1.7838	0.0049	0.0100	0.0357	2016 v.1
Las Vegas Cogeneration	Turbine	329	4	20100201	51	1.410	0.0039	0.0079	1.8630	0.0051	0.0104	0.0357	2016 v.1
Boral Roofing	Curing Tunnel	346	B18	30500850	25	0.010	0.0000	0.0000	0.0132	0.0000	0.0000	0.0357	2016 v.1
Boral Roofing	Surface coating	346	AB	40299995	25	2.860	0.0078	0.0078	3.7789	0.0104	0.0104	0.0357	2016 v.1

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Aggregate Industries	Boiler	372	10	10300602	25	0.120	0.0003	0.0003	0.1586	0.0004	0.0004	0.0357	2016 v.1
Aggregate Industries	Generator	372	1	20100102	25	3.290	0.0090	0.0090	4.3471	0.0119	0.0119	0.0357	2016 v.1
Aggregate Industries	Mineral Products	372	4	30500208	25	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2016 v.1
Aggregate Industries	Mineral Products	372	5	30500208	25	0.010	0.0000	0.0000	0.0120	0.0000	0.0000	0.0220	2016 v.1
Aggregate Industries	Mineral Products	372	2	30500208	25	0.015	0.0000	0.0000	0.0180	0.0000	0.0000	0.0220	2016 v.1
Aggregate Industries	Mineral Products	372	3	30500242	25	0.015	0.0000	0.0000	0.0183	0.0001	0.0001	0.0243	2016 v.1
Aggregate Industries	Mineral Products	372	13	30502599	25	0.030	0.0001	0.0001	0.0366	0.0001	0.0001	0.0243	2016 v.1
Saguaro Power Company	Boiler	393	5	10100601	27	0.276	0.0008	0.0008	0.3364	0.0009	0.0010	0.0243	2016 v.1
Saguaro Power Company	Boiler	393	6	10100602	27	0.137	0.0004	0.0004	0.1670	0.0005	0.0005	0.0243	2016 v.1
Saguaro Power Company	Starter	393	3	20100102	27	0.005	0.0000	0.0000	0.0061	0.0000	0.0000	0.0243	2016 v.1
Saguaro Power Company	Starter	393	4	20100102	27	0.006	0.0000	0.0000	0.0073	0.0000	0.0000	0.0243	2016 v.1
Saguaro Power Company	Generator	393	7	20100102	27	0.050	0.0001	0.0001	0.0609	0.0002	0.0002	0.0243	2016 v.1
Saguaro Power Company	Turbine	393	1	20100201	27	3.875	0.0106	0.0115	4.7225	0.0129	0.0140	0.0243	2016 v.1
Saguaro Power Company	Turbine	393	2	20100201	27	3.881	0.0106	0.0115	4.7298	0.0130	0.0140	0.0243	2016 v.1
City of Las Vegas WPCF	Generator	402	2	20200102	25	0.070	0.0002	0.0002	0.0853	0.0002	0.0002	0.0243	2016 v.1
City of Las Vegas WPCF	Generator	402	3	20200202	25	0.010	0.0000	0.0000	0.0122	0.0000	0.0000	0.0243	2016 v.1
City of Las Vegas WPCF	Waste Flare	402	5	50100789	25	0.340	0.0009	0.0009	0.4144	0.0011	0.0011	0.0243	2016 v.1
City of Las Vegas WPCF	Boilers	402	8	50100799	25	0.110	0.0003	0.0003	0.1341	0.0004	0.0004	0.0243	2016 v.1
City of Las Vegas WPCF	Boilers	402	7	50100799	25	0.210	0.0006	0.0006	0.2559	0.0007	0.0007	0.0243	2016 v.1
City of Las Vegas WPCF	Blower Engines	402	6	50100799	25	3.640	0.0100	0.0100	4.3443	0.0119	0.0119	0.0215	2016 v.1
Nikkiso Cryo	Generator	404	1	20200102	25	0.390	0.0011	0.0011	0.4623	0.0013	0.0013	0.0206	2016 v.1
Nevada Sun Peak Partnerships	Turbine	423	3	20100201	37	0.060	0.0002	0.0002	0.0711	0.0002	0.0003	0.0206	2016 v.1
Nevada Sun Peak Partnerships	Turbine	423	2	20100201	37	0.080	0.0002	0.0003	0.0948	0.0003	0.0004	0.0206	2016 v.1
Nevada Sun Peak Partnerships	Turbine	423	1	20100201	37	0.110	0.0003	0.0004	0.1304	0.0004	0.0005	0.0206	2016 v.1

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Hard Rock Hotel and Casino	Boiler	510	A	10300603	25	0.230	0.0006	0.0006	0.2753	0.0008	0.0008	0.0219	2016 v.1
Hard Rock Hotel and Casino	Generator	510	B	20300101	25	0.020	0.0001	0.0001	0.0239	0.0001	0.0001	0.0219	2016 v.1
Texas Station Casino	Boiler	531	A	10300603	25	0.400	0.0011	0.0011	0.4788	0.0013	0.0013	0.0219	2016 v.1
Texas Station Casino	Generator	531	B	20300101	25	0.020	0.0001	0.0001	0.0239	0.0001	0.0001	0.0219	2016 v.1
Citibank The Lakes	Generator	546	A	20300101	25	0.010	0.0000	0.0000	0.0120	0.0000	0.0000	0.0219	2016 v.1
Rio All Suites Hotel and Casino	Boiler	555	A	10300603	25	1.580	0.0043	0.0043	1.8914	0.0052	0.0052	0.0219	2016 v.1
Rio All Suites Hotel and Casino	Generator	555	C	20300101	25	0.050	0.0001	0.0001	0.0599	0.0002	0.0002	0.0219	2016 v.1
Kurt Segler Water Reclamation	Generator	558	B	20200102	25	0.900	0.0025	0.0025	1.0774	0.0030	0.0030	0.0219	2016 v.1
Kurt Segler Water Reclamation	Waste water treatment	558	B01	50100765	25	0.240	0.0007	0.0007	0.2873	0.0008	0.0008	0.0219	2016 v.1
Stratosphere Hotel and Casino	Boiler	564	A	10300603	25	0.330	0.0009	0.0009	0.3950	0.0011	0.0011	0.0219	2016 v.1
Stratosphere Hotel and Casino	Generator	564	B	20300101	25	0.170	0.0005	0.0005	0.2035	0.0006	0.0006	0.0219	2016 v.1
Aggregate Industries - Gowan	Drum Mixer	587	A08	30500205	25	2.980	0.0082	0.0082	3.5674	0.0098	0.0098	0.0219	2016 v.1
Aggregate Industries - Gowan	Asphalt Oil Heater	587	E	30500208	25	0.070	0.0002	0.0002	0.0838	0.0002	0.0002	0.0219	2016 v.1
Aggregate Industries - Gowan	Asphalt Silos	587	A12	30500212	25	4.380	0.0120	0.0120	5.2433	0.0144	0.0144	0.0219	2016 v.1
Las Vegas Review Journal	Generator	588	D	20300101	25	0.010	0.0000	0.0000	0.0120	0.0000	0.0000	0.0219	2016 v.1
Las Vegas Review Journal	Parts Washer	588	B	40500417	25	8.080	0.0221	0.0221	9.6726	0.0265	0.0265	0.0219	2016 v.1
Berry Plastics Corporation	Generator	597	F01	20300101	25	0.010	0.0000	0.0000	0.0120	0.0000	0.0000	0.0219	2016 v.1
Berry Plastics Corporation	Offset Printing	597	E01	40500802	25	5.630	0.0154	0.0154	6.7397	0.0185	0.0185	0.0219	2016 v.1
Palace Station Hotel and Casino	Boiler	605	A	10300603	25	0.490	0.0013	0.0013	0.5866	0.0016	0.0016	0.0219	2016 v.1
Palace Station Hotel and Casino	Generator	605	B	20300101	25	0.020	0.0001	0.0001	0.0239	0.0001	0.0001	0.0219	2016 v.1
Gold Coast Hotel and Casino	Boiler	606	A	10300603	25	0.270	0.0007	0.0007	0.0331	-0.0001	-0.0001	-0.1247	IPM
Gold Coast Hotel and Casino	Generator	606	B	20300101	25	0.060	0.0002	0.0002	0.0041	0.0000	0.0000	-0.1034	IPM
Sams Town Hotel and Casino	Boiler	616	A	10300603	25	0.230	0.0006	0.0006	0.0277	-0.0001	-0.0001	-0.1245	IPM
Sams Town Hotel and Casino	Generator	616	B	20300101	25	0.010	0.0000	0.0000	0.0012	0.0000	0.0000	-0.1246	IPM

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Santa Fe Station	Boiler	621	A	10300603	25	0.670	0.0018	0.0018	0.6821	0.0019	0.0019	0.0020	2016 v.1
Santa Fe Station	Generator	621	B	20300101	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	default value
University of Nevada, Las Vegas	Boiler	634	A	10300603	25	0.740	0.0020	0.0020	0.7400	0.0020	0.0020	0.0000	2016 v.1
University of Nevada, Las Vegas	Generator	634	B	20300101	25	0.060	0.0002	0.0002	0.0600	0.0002	0.0002	0.0000	2016 v.1
Orleans Hotel and Casino	Boiler	641	A	10300603	25	0.500	0.0014	0.0014	0.5000	0.0014	0.0014	0.0000	2016 v.1
Orleans Hotel and Casino	Generator	641	B	20300101	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	2016 v.1
Venetian Hotel and Casino	Boiler	697	B	10300603	25	3.170	0.0087	0.0087	3.1700	0.0087	0.0087	0.0000	2016 v.1
Venetian Hotel and Casino	Generator	697	C	20300101	25	0.120	0.0003	0.0003	0.1200	0.0003	0.0003	0.0000	2016 v.1
Verizon Business	Generator	726	A	20300101	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	2016 v.1
Nevada Color Litho	Printing Press	754	A05	40500433	25	18.860	0.0517	0.0517	18.8600	0.0517	0.0517	0.0000	2016 v.1
JW Marriott Las Vegas	Boiler	755	A	10300603	25	0.340	0.0009	0.0009	0.3400	0.0009	0.0009	0.0000	default value
JW Marriott Las Vegas	Generator	755	B	20300101	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	default value
Suncoast Hotel and Casino	Boiler	775	A	10300603	25	0.230	0.0006	0.0006	0.2300	0.0006	0.0006	0.0000	default value
Suncoast Hotel and Casino	Generator	775	B	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	default value
Viawest	Generator	777	A	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	2016 v.1
Cancun Resort	Boiler	788	A	10300603	25	0.160	0.0004	0.0004	0.1600	0.0004	0.0004	0.0000	2016 v.1
Cancun Resort	Generator	788	B	20300101	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	2016 v.1
Clearwater Paper	Boiler	807	A10	10200602	25	0.560	0.0015	0.0015	0.5600	0.0015	0.0015	0.0000	2016 v.1
Clearwater Paper	Air heaters	807	A08	30790003	25	6.930	0.0190	0.0190	6.9300	0.0190	0.0190	0.0000	2016 v.1
Clearwater Paper	Paper process fugitives	807	F	30799998	25	14.580	0.0399	0.0399	14.5800	0.0399	0.0399	0.0000	2016 v.1
MGM Grand/New York New York	Boiler	825	A	10300603	25	5.840	0.0160	0.0160	5.8400	0.0160	0.0160	0.0000	default value
MGM Grand/New York New York	Turbine	825	E	20100201	25	0.850	0.0023	0.0023	0.8500	0.0023	0.0023	0.0000	2016 v.1
MGM Grand/New York New York	Generator	825	B	20300101	25	0.550	0.0015	0.0015	0.5500	0.0015	0.0015	0.0000	2016 v.1
MGM Grand/New York New York	Paint booth	825	C	40201101	25	1.690	0.0046	0.0046	1.6900	0.0046	0.0046	0.0000	2016 v.1

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MGM Grand/New York New York	Tank	825	D	40600401	25	1.930	0.0053	0.0053	1.9300	0.0053	0.0053	0.0000	2016 v.1
Univeral Urethane	Molding machines	859	A	30800802	25	14.370	0.0394	0.0394	14.3700	0.0394	0.0394	0.0000	2016 v.1
Univeral Urethane	Spray painting booths	859	B	40202201	25	7.880	0.0216	0.0216	7.8800	0.0216	0.0216	0.0000	2016 v.1
Sunset Station	Boiler	869	A	10300603	25	0.320	0.0009	0.0009	0.3200	0.0009	0.0009	0.0000	2016 v.1
Sunset Station	Generator	869	B	20300101	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	2016 v.1
Yesco	Spray painting booths	974	A	40200101	25	4.820	0.0132	0.0132	4.8200	0.0132	0.0132	0.0000	2016 v.1
West Rock	Printing Press	1055	A	40500501	25	10.860	0.0298	0.0298	10.8600	0.0298	0.0298	0.0000	2016 v.1
Republic Services Transfer Station	Boiler	1087	B	10300603	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	2016 v.1
Republic Services Transfer Station	Generator	1087	G	20300101	25	0.440	0.0012	0.0012	0.4400	0.0012	0.0012	0.0000	2016 v.1
Republic Services Transfer Station	Spray painting booths	1087	A10	40201601	25	4.830	0.0132	0.0132	4.8300	0.0132	0.0132	0.0000	2016 v.1
Republic Services Transfer Station	UST	1087	A11	40600306	25	0.380	0.0010	0.0010	0.3800	0.0010	0.0010	0.0000	2016 v.1
Las Vegas Color Graphics	Printing Press	1149	A	40500411	25	7.300	0.0200	0.0200	7.3000	0.0200	0.0200	0.0000	2016 v.1
St Rose Dominican Siena	Boiler	1500	A	10300603	25	0.760	0.0021	0.0021	0.7600	0.0021	0.0021	0.0000	2016 v.1
St Rose Dominican Siena	Generator	1500	B	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	2016 v.1
Green Valley Ranch Resort	Boiler	1501	A	10300603	25	0.220	0.0006	0.0006	0.2200	0.0006	0.0006	0.0000	2016 v.1
Green Valley Ranch Resort	Generator	1501	B	20300101	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	2016 v.1
Palms Casino Resort	Boiler	1522	A	10300603	25	0.390	0.0011	0.0011	0.3900	0.0011	0.0011	0.0000	2016 v.1
Palms Casino Resort	Generator	1522	B	20300101	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	2016 v.1
Boulder Station Hotel and Casino	Boiler	1524	A	10300603	25	0.150	0.0004	0.0004	0.1500	0.0004	0.0004	0.0000	2016 v.1
Boulder Station Hotel and Casino	Generator	1524	B	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	2016 v.1
Mountain View Hospital	Boiler	1569	A	10300603	25	0.220	0.0006	0.0006	0.2200	0.0006	0.0006	0.0000	2016 v.1
Mountain View Hospital	Generator	1569	B	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	2016 v.1
LasfueI McCarran Tank Farm	Generator	1589	C	20300101	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	2016 v.1
LasfueI McCarran Tank Farm	Thermal Oxidizer	1589	B06	40400153	25	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2016 v.1

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Lasfuel McCarran Tank Farm	Tank	1589	A	40400199	25	14.300	0.0392	0.0392	14.3000	0.0392	0.0392	0.0000	2016 v.1
Lasfuel McCarran Tank Farm	Loading Rack	1589	B	40400250	25	0.490	0.0013	0.0013	0.4900	0.0013	0.0013	0.0000	2016 v.1
Wynn Las Vegas	Boiler	1624	A	10300602	25	1.190	0.0033	0.0033	1.1900	0.0033	0.0033	0.0000	2016 v.1
Wynn Las Vegas	Generator	1624	C	20100102	25	0.320	0.0009	0.0009	0.3200	0.0009	0.0009	0.0000	2016 v.1
Wynn Las Vegas	Dry Cleaning	1624	R	40100103	25	0.240	0.0007	0.0007	0.2400	0.0007	0.0007	0.0000	2016 v.1
Wynn Las Vegas	AST	1624	F	40600306	25	0.070	0.0002	0.0002	0.0700	0.0002	0.0002	0.0000	2016 v.1
North Las Vegas Airport	Tank	9596	A	40600706	25	1.400	0.0038	0.0038	1.4000	0.0038	0.0038	0.0000	2016 v.1
Henderson Executive Airport	Tank	9603	A	40600706	25	0.860	0.0024	0.0024	0.8600	0.0024	0.0024	0.0000	2016 v.1
Brady Linen Services	Boiler	10201	B	10200602	25	0.880	0.0024	0.0024	0.8800	0.0024	0.0024	0.0000	2016 v.1
Brady Linen Services	Dry Cleaning	10201	M	41000115	25	1.760	0.0048	0.0048	1.8265	0.0050	0.0050	0.0042	2016 v.1
Brady Linen Services	Dryer	10201	D	41000130	25	0.990	0.0027	0.0027	1.3393	0.0037	0.0037	0.0392	2016 v.1
Republic Services (Sunrise)	Flare	15033	1	50300601	25	1.190	0.0033	0.0033	1.1900	0.0033	0.0033	0.0000	default value
CPP Acquisition	Dryer	15193	D	40500101	25	0.670	0.0018	0.0018	0.6700	0.0018	0.0018	0.0000	2016 v.1
CPP Acquisition	Printer	15193	P	40500401	25	20.490	0.0561	0.0561	20.4900	0.0561	0.0561	0.0000	2016 v.1
McCarran Rent a Car Center	Boiler	15409	A	10300603	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	2016 v.1
McCarran Rent a Car Center	Tank	15409	T	40600306	25	8.390	0.0230	0.0230	8.3900	0.0230	0.0230	0.0000	2016 v.1
Metl Span	Panel manufacturing	15422	A01	30800802	25	2.420	0.0066	0.0066	2.4200	0.0066	0.0066	0.0000	2016 v.1
Metl Span	Panel Coating	15422	A05	30801005	25	2.180	0.0060	0.0060	2.1800	0.0060	0.0060	0.0000	2016 v.1
Artesian Spas	Frame and skirting process	15426	A06	24010900	25	0.660	0.0018	0.0018	0.6600	0.0018	0.0018	0.0000	2016 v.1
Artesian Spas	Spray booth with RTO	15426	A01	30800724	25	1.530	0.0042	0.0042	1.5300	0.0042	0.0042	0.0000	default value
Artesian Spas	Plumbing system installation	15426	A05	30800799	25	4.780	0.0131	0.0131	4.7800	0.0131	0.0131	0.0000	2016 v.1
Red Rock Casino Resort	Boiler	15487	A	10300602	25	0.490	0.0013	0.0013	0.4900	0.0013	0.0013	0.0000	default value
Red Rock Casino Resort	Generator	15487	B	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	default value
South Point Hotel and Casino	Boiler	15515	A	10300602	25	0.530	0.0015	0.0015	0.5300	0.0015	0.0015	0.0000	2016 v.1

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South Point Hotel and Casino	Generator	15515	B	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	2016 v.1
World Market Center	Boiler	15541	A	10300602	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	2016 v.1
World Market Center	Generator	15541	B	20300101	25	0.060	0.0002	0.0002	0.0600	0.0002	0.0002	0.0000	default value
CDW Logistics	Generator	15634	A	20300101	25	0.040	0.0001	0.0001	0.0400	0.0001	0.0001	0.0000	default value
Manheim Nevada	Generator	15839	C	20100102	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	default value
Manheim Nevada	Heater	15839	B	40201001	25	0.280	0.0008	0.0008	0.2800	0.0008	0.0008	0.0000	default value
Manheim Nevada	Paint booth	15839	A	40201601	25	4.430	0.0121	0.0121	4.4300	0.0121	0.0121	0.0000	default value
Manheim Nevada	AST	15839	D	40600401	25	0.990	0.0027	0.0027	0.9900	0.0027	0.0027	0.0000	default value
City of Henderson Downtown	Boiler	15847	B	10300603	25	0.230	0.0006	0.0006	0.2300	0.0006	0.0006	0.0000	2016 v.1
City of Henderson Downtown	Generator	15847	G	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	default value
Centennial Hills Hospital	Boiler	15873	A	10300602	25	0.320	0.0009	0.0009	0.3200	0.0009	0.0009	0.0000	default value
Centennial Hills Hospital	Generator	15873	C	20300101	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	default value
Plasticard Locktech	Heater	15876	B	10300603	25	0.100	0.0003	0.0003	0.1000	0.0003	0.0003	0.0000	default value
Plasticard Locktech	Press	15876	A	40202201	25	10.640	0.0292	0.0292	10.6400	0.0292	0.0292	0.0000	default value
Veterans Administration	Boiler	15970	A	10300602	25	0.130	0.0004	0.0004	0.1298	0.0004	0.0004	-0.0002	2016 v.1
Veterans Administration	Generator	15970	B	20300101	25	0.740	0.0020	0.0020	0.7387	0.0020	0.0020	-0.0002	2016 v.1
2755 Las Vegas	Boiler	15999	A	10300602	25	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0180	2016 v.1
2755 Las Vegas	Generator	15999	B	20300101	25	0.030	0.0001	0.0001	0.0349	0.0001	0.0001	0.0180	2016 v.1
Cosmopolitan Las Vegas	Boiler	16101	A	10300602	25	0.900	0.0025	0.0025	1.0458	0.0029	0.0029	0.0180	2016 v.1
Cosmopolitan Las Vegas	Generator	16101	B	20300101	25	0.010	0.0000	0.0000	0.0116	0.0000	0.0000	0.0180	2016 v.1
Biodiesel of Las Vegas	Fire Pump	16118	C01	20200102	25	0.040	0.0001	0.0001	0.0400	0.0001	0.0001	0.0000	default value
Ritchie Brothers	Paint booth	16172	A01	40201601	25	0.960	0.0026	0.0026	0.9600	0.0026	0.0026	0.0000	default value
Switch	Generator	16258	B	20300101	25	0.130	0.0004	0.0004	0.1146	0.0003	0.0003	-0.0132	2016 v.1
Beltway Complex	Generator	16290	A	20300101	25	0.040	0.0001	0.0001	0.0353	0.0001	0.0001	-0.0130	2016 v.1

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Beltway Complex	AST	16290	A14	40600306	25	0.290	0.0008	0.0008	0.2900	0.0008	0.0008	0.0000	2016 v.1
Erickson International	RTO	16295	B	30190013	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	default value
Erickson International	Dryer	16295	C	40200101	25	0.020	0.0001	0.0001	0.0200	0.0001	0.0001	0.0000	2016 v.1
Erickson International	Laminator	16295	A	40200701	25	1.970	0.0054	0.0054	1.9700	0.0054	0.0054	0.0000	2016 v.1
GE Transport	Parts Washer	16300	A	40201501	25	1.040	0.0028	0.0028	1.0400	0.0028	0.0028	0.0000	default value
Switch Communications	Generator	16304	A	20022102	25	0.510	0.0014	0.0014	0.4985	0.0014	0.0014	-0.0025	2016 v.1
Pro Terminal Operators	Loading Rack	16376	A07	40400150	25	15.390	0.0422	0.0422	15.9717	0.0438	0.0438	0.0042	2016 v.1
Pro Terminal Operators	Tanks	16376	A	40400178	25	12.180	0.0334	0.0334	12.3006	0.0337	0.0337	0.0011	2016 v.1
Treasure Island	Boiler	16452	A	10300603	25	0.630	0.0017	0.0017	0.6538	0.0018	0.0018	0.0042	2016 v.1
Treasure Island	Spray booth	16452	C01	40200102	25	0.290	0.0008	0.0008	0.3010	0.0008	0.0008	0.0042	2016 v.1
Clark County Downtown Campus	Boiler	16665	A	10300603	25	0.710	0.0019	0.0019	0.7100	0.0019	0.0019	0.0000	default value
Clark County Downtown Campus	Generator	16665	B	20300101	25	0.110	0.0003	0.0003	0.1100	0.0003	0.0003	0.0000	default value
CTC Crushing	Generator	16673	B	20300101	25	0.610	0.0017	0.0017	0.6100	0.0017	0.0017	0.0000	default value
Freeman	Generator	16684	B	20300101	25	0.010	0.0000	0.0000	0.0100	0.0000	0.0000	0.0000	default value
Freeman	Spray booth	16684	D	40200102	25	0.660	0.0018	0.0018	0.6600	0.0018	0.0018	0.0000	default value
Terra Firma Organics	Generator	16706	B	20300101	25	0.160	0.0004	0.0004	0.1600	0.0004	0.0004	0.0000	default value
Resorts World	Boiler	16925	B	10300602	25	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	default value
Resorts World	Generator	16925	A	20300101	25	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	default value
Preferred Laminations	Surface Coating	17220	A	40202501	25	4.410	0.0121	0.0121	4.4100	0.0121	0.0121	0.0000	default value
Viawest Lone Mountain Data Center	Generator	17272	A	20300101	25	0.030	0.0001	0.0001	0.0300	0.0001	0.0001	0.0000	default value
Blue Diamond Hill Gypsum	Engines	17286	C	20300101	25	4.280	0.0117	0.0117	4.4726	0.0123	0.0123	0.0050	2016 v.1
Shelby American	Spray booth	17347	A	40201606	25	1.540	0.0042	0.0042	1.6093	0.0044	0.0044	0.0050	2016 v.1
Shelby American	AST	17347	B01	40600306	25	0.130	0.0004	0.0004	0.1359	0.0004	0.0004	0.0050	2016 v.1
NBC Fourth Realty	Generator	17439	A	20301001	25	0.160	0.0004	0.0004	0.1600	0.0004	0.0004	0.0000	default value

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Wells Cargo Lone Mountain	Engines	17749	B	20300101	25	0.170	0.0005	0.0005	0.1700	0.0005	0.0005	0.0000	2016 v.1
Wells Cargo Lone Mountain	Blasting	17749	C02	30504001	25	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2016 v.1
Progress Rail	Parts Washer	17918	A01	10300603	25	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2016 v.1
Total						447.03	1.22	1.25	482.85	1.32	1.35		