



CERTIFIED MAIL # 7014 2120 0002 9356 0204

RETURN RECEIPT REQUESTED

May 6, 2015

Maricopa County Air Quality Department
Emission Inventory Unit
1001 North Central Avenue, Suite 125
Phoenix, Arizona 85004

Re: Air Permit # 970053 - 2014 Annual Emissions Inventory
Intel Corporation Chandler Campus

To Whom this May Concern,

Intel Corporation operates its Chandler campus at 5000 West Chandler Blvd., Chandler, Arizona 85226-3601 and holds Air Quality Permit # 970053 issued by Maricopa County Air Quality Department (MCAQD). Enclosed is the 2014 Maricopa County Annual Emissions Inventory for the Intel Chandler Campus.

During the 2014 reporting year, the Intel Main Chandler Campus is Technology Development Process and is a research and development facility.

If you have any questions or would like additional information, please feel free to contact Mrs. Leila Kabiri, Site Environmental Engineer, at 480-552-3781. Please include my mailstop CH7-332 on any written correspondence.

On behalf of Intel Corporation,

A handwritten signature in black ink, appearing to be "L. Kabiri", written over a horizontal line.

Leila Kabiri, Environmental Engineer
5000 W. Chandler Blvd, MS: CH7-332
(480) 552-3781
leila.kabiri-badr@intel.com

CC. Internal File: 3319-Air-CH / 2014 Air Emissions Inventory

Intel Corporation
5000 W Chandler Blvd
Chandler, AZ 85226
1.480.554.8080
www.intel.com

MARICOPA COUNTY
AIR QUALITY
DEPARTMENT

Emissions Inventory Unit
(602) 506-6790
(602) 506-6985 (FAX)

2014 Annual Emissions Inventory

Business Form

Due Date: 5/6/2015
Permit Number 970053

FULL Business Form is WORD File. Just Enter in Permit Number(s)

2014 Annual Emissions Inventory

Business Form

Due Date: 05/06/2015

Permit Number(s) 970053

- 1- Owner Name: Intel Corporation
- 2- Business Name: Intel Corp – Chandler Campus (Fab 6)
- 3- Business Street Address (Physical Location): 5000 W Chandler Blvd
- 4- City: Chandler 5- ZIP Code: 85226
- 6- Number of Employees at this location: 5500 7- Property Size: 160 acres
- 8- SIC Code: Primary: 3674 Secondary: _____
- 9- NAICS Code: Primary: 334413 Secondary: _____
- 10- Preparer of the Inventory (primary contact for technical questions concerning this report):
Name: Leila Kabiri
Title: Environmental Engineer
Employer: Intel Corporation
Telephone: (480) 552 3781 Fax: _____
E-mail address of preparer: Leila.kabiri-badr@intel.com
- 11- Who should receive the Annual Emissions Inventory Form next year?
Name: Leila Kabiri
Title: Environmental Engineer
Employer: Intel Corporation
Address: 5000 W Chandler Blvd, MS CH7-332
City: Chandler State: AZ ZIP Code: 85226
Telephone: (480) 552-3781 Fax: _____

Return the original copy of all completed forms to:
Maricopa County Air Quality Department
Emissions Inventory Unit
1001 N. Central Avenue, Suite 125
Phoenix AZ 85004

31617

For more information, contact the Maricopa County Emissions Inventory Unit at (602) 506-6790.
Detailed instructions, sample forms and reference materials are available at:
http://www.maricopa.gov/aq/divisions/planning_analysis/emissions_inventory/Default.aspx



Maricopa County
Air Quality Department

Emission Inventory Unit
1001 N. Central Ave., Ste. 595
Phoenix, AZ 85004
Phone (602) 506-6790

Stack Form 2014

Permit Number: **970053**

1	2	3	4	5a OR 5b		6a OR 6b and 6c	7	
Stack ID	Stack Type Code*	Stack Height**	Exit Gas Temperature	Velocity feet/sec	Flow Rate acfm	Diameter inside inch	Length / Width inside inch	Stack Name/Description Include Lat/long coordinates of stack (in decimal degrees)
1	V	59 ft	68 °F	63.1	90,000	66	72 48	CH1 Fume Scrubber #1&2 (FS-01/02) -111.93095 33.30773
2	V	42 ft	68 °F	17.0	1,800	18		RODI Scrubber
3	V	40 ft	68 °F	10.6	500	12		RODI HCl Scrubber
4	V	44 ft	68 °F	63.7	12,000	24		CH4 Corrosive Fume Scrubber #3 -111.93264 33.31029
5	V	44 ft	68 °F	26.5	5,000	24		CH4 Corrosive Fume Scrubber #4 (Used As Exhaust Only, No water Running) Labs -111.93264 33.31029
6	V	8 ft	68 °F	40.7	12,000	30		CH6 Corrosive Fume Scrubber (Used As Exhaust Only, No water Running) -111.93264 33.31029
7	V	59 ft	68 °F	61.0	2,000	10		CH1 Cyanide Scrubber -111.93095 33.30773
8	V	90 ft	68 °F	146.2 49.1	150,000	56		CH8 Fume Scrubbers, #1, 2 and 3 -111.93239 33.31039
9	V	90 ft	68 °F	34.6 35.5	5,000	22		CH8 Ammonia Scrubber -111.93151 33.30978
10	V	90 ft	68 °F	34.2 31.4	2,000	14		CH8 Cyanide Scrubber -111.93151 33.30978
11	V	59 ft	68 °F	60	5,000	16		CH1 Ammonia Scrubber -111.93095 33.30773

* Stack Type Codes: V=Vertical unobstructed H=Horizontal unobstructed D=Downward unobstructed G=Gooseneck
W=Obstructed vertical (e.g. weather cap)

** Stack Height is calculated relative to the surrounding terrain. For example: The stack height of a 10 foot stack sitting on a 20 foot building is 30 feet.



Maricopa County
Air Quality Department

Emission Inventory Unit
1001 N. Central Ave., Ste. 595
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Phone (602) 506-6790

Control Device Form 2014

Permit Number: 970053

1	2	3	4	5	6
Control ID	Installation/ Reconstruction* Date	Size or Rated Capacity**	Control Type Code	Control Device Name/Description	Stack ID (if applicable)
1	7/1/2010	90000 cfm	141	CH1 Fume Scrubber #1 and 2 (FS-01/02)	1
2	7/1/2010	1000 cfm	038	CH1 Ammonia Scrubber (CH1-SC1 42-21)	11
6	10/1/2013	2000 cfm	141	CH1 Cyanide Scrubber (CH1-R1-FS-01)	7
7	11/1/2013	150000 cfm	141	CH8 Fume Scrubbers #1, 2, and 3 (CH8-SC1 33-01, CH8-SC1 33-02, and CH8-SC1 33-03)	8
8	11/1/2013	5000 cfm	038	CH8 Ammonia Scrubber (CH8-SC1 42-01)	9
9	11/1/2013	2000 cfm	429 141	CH8 Cyanide Scrubber (CH8-SC1 45-01)	10

* Reconstruction means any component of the control device was replaced and the cost (fixed capital) of the new component(s) was more than half of what it would have cost to purchase or construct a new control device.

** Air or water flow rate in cubic feet per minute.

General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

1- Process ID 1

2- Process Type/Description: EC1-B01/02/03; (Combined) BOILER

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020301

5- SCC Code 10200603 (8 digit number)

6- Seasonal Throughput Percent: _____

7- Normal Operating Schedule: _____

8- Typical Hours of Operation (military time) _____

9- Emissions based on (frame of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") _____

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 70

12- Fuel Sulfur Content (in percent) 0 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) MM CU FT

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information				Estimated Actual Emissions	
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency		24 Efficiency Reference Code**
CO	84	MM CU FT	N	5						5866 lbs
NOX	100	MM CU FT	N	5						6983 lbs
PM-10	7.6	MM CU FT	N	5						531 lbs
SOX	0.6	MM CU FT	N	5						42 lbs
VOC	5.5	MM CU FT	N	5						384 lbs
HAP&NON	1.88	MM CU FT	N	5						132 lbs
PM-2.5	7.6	MM CU FT	N	5						531 lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 6 = State or Local Agency Emission Factor
- 7 = Manufacturer Specifications
- 8 = Site-Specific Emission Factor
- 9 = Vendor Emission Factor
- 10 = Trade Group Emission Factor
- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value

General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See instructions for requirements for information to be deemed confidential

1- Process ID 2

2- Process Type/Description: Boilers EC1-B04/05 (Combined)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020301

5- SCC Code 10200602 (8 digit number)

Fuel Comb. Industrial: Gas - Natural
Industrial: Nat Gas: 10-100 MMBTU/HR

6- Seasonal Throughput Percent: Dec-Feb 30 % Mar-May 20 % Jun-Aug 20 % Sep-Nov 30 %

7- Normal Operating Schedule: Hours/Day 24 Days/Week 7 Hours/Year 8760 Weeks/Year 52

8- Typical Hours of Operation (military time) Start 00:00 End 23:59

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") Natural Gas

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 89 12- Fuel Sulfur Content (in percent) 0 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) MM CU FT

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information						Estimated Actual Emissions
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency	24 Efficiency Reference Code**	25	
CO	84	MM CU FT	N	5						7456 lbs	
NOX	100	MM CU FT	N	5						8875 lbs	
PM-10	7.6	MM CU FT	N	5						675 lbs	
SOX	0.6	MM CU FT	N	5						53 lbs	
VOC	5.5	MM CU FT	N	5						488 lbs	
HAP&NON	1.88 1.89	MM CU FT	N	5						168 lbs	
PM-2.5	7.6	MM CU FT	N	5						675 lbs	

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value

General Process Form 2014

Permit number(s) 970053

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1- Process ID 3

2- Process Type/Description: Boilers EC1-B01/02/03; (Combined)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020202

5- SCC Code 10200503 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 30 %

7- Normal Operating Schedule: Hours/Day 24

8- Typical Hours of Operation (military time) Start 00:00 End 23:59

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") Diesel

10- Used (input) or Produced (output) or Existing(e.g. VMT, acres)

11- Annual Amount (a number) 0

12- Fuel Sulfur Content (in percent) _____ %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) M GALS

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information				25	
	16	17	18	19	20	21	22	23		24
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	5	M GALS	N	5						lbs
NOX	20	M GALS	N	5						lbs
PM-10	2	M GALS	N	5						lbs
SOX	7.2	M GALS	N	5						lbs
VOC	0.2	M GALS	N	5						lbs
PM-2.5	7.2	M GALS	N	5						lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 6 = State or Local Agency Emission Factor
- 7 = Manufacturer Specifications
- 8 = Site-Specific Emission Factor
- 9 = Vendor Emission Factor
- 10 = Trade Group Emission Factor
- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value

General Process Form 2014

Permit number(s) 970053

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1- Process ID 4

2- Process Type/Description: Boilers EC1-B04/05; (Combined)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020202

Fuel Comb. Industrial: Oil - Distillate
 Industrial: Distillate Oil: 10-100 MMBTU/HR

5- SCC Code 10200502 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 30 %

7- Normal Operating Schedule: Hours/Day 24

8- Typical Hours of Operation (military time) Start 00:00

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") Diesel

10- Used (input) or Produced (output) or Existing(e.g. VMT, acres)

11- Annual Amount (a number) 0

12- Fuel Sulfur Content (in percent) _____ %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) M GALS

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information				25	
	16	17	18	19	20	21	22	23		24
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	5	M GALS	N	5						lbs
NOX	20	M GALS	N	5						lbs
PM-10	1	M GALS	N	5						lbs
SOX	7.1	M GALS	N	5						lbs
VOC	0.252	M GALS	N	5						lbs
PM-2.5	7.1	M GALS	N	5						lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value

General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

1- Process ID 5

2- Process Type/Description: CH8 Boilers (Combined)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020301

5- SCC Code 10200603 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 30 %

7- Normal Operating Schedule: Hours/Day 24 Days/Week 7 Hours/Year 8760 Weeks/Year 52

8- Typical Hours of Operation (military time) Start 00:00 End 23:59

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") Natural Gas

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 64.2 (Sep-Dec) 12- Fuel Sulfur Content (in percent) 0 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) MM CU FT

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information						Estimated Actual Emissions
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency	24 Efficiency Reference Code**	25	
CO	20.8	MM CU FT	N	7						1336	
NOX	28.8	MM CU FT	N	7						1849	
PM-10	7.6	MM CU FT	N	5						488	
SOX	0.6	MM CU FT	N	5						39	
VOC	5.5	MM CU FT	N	5						353	
HAP&NON	1.88 1.89	MM CU FT	N	5						121	
PM-2.5	7.6	MM CU FT	N	5						488	

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value



Maricopa County
Air Quality Department

Emission Inventory Unit
1001 N. Central Ave., Ste. 595
Phoenix, AZ 85004
Phone (602) 506-6790

General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

1- Process ID 6

2- Process Type/Description: F6-EG-01 Emergency Generator (>600HP)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599

5- SCC Code 20200401 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 20 %

7- Normal Operating Schedule: Hours/Day 1

8- Typical Hours of Operation (military time) Start 00:00

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") RUN TIME HOURS

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 12.2

12- Fuel Sulfur Content (in percent) _____ %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information				Estimated Actual Emissions	
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency		24 Efficiency Reference Code**
CO	0.6	HRS OF OPERATION	N	7						8 lbs
NOX	3.0	HRS OF OPERATION	N	7						37 lbs
PM-10	0.13	HRS OF OPERATION	N	7						2 lbs
SOX	6.9	HRS OF OPERATION	N	5						6 lbs
VOC	14.2	HRS OF OPERATION	N	5						10 lbs
HAP&NON	0.6	HRS OF OPERATION	N	6-5						0.4 lbs
PM-2.5	0.13	HRS OF OPERATION	N	7						2 lbs

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

- 6 = State or Local Agency Emission Factor
- 7 = Manufacturer Specifications
- 8 = Site-Specific Emission Factor
- 9 = Vendor Emission Factor
- 10 = Trade Group Emission Factor

- ** Control Efficiency Reference Codes**
- 1 = Tested efficiency / EPA reference method
 - 2 = Tested efficiency / other source test method
 - 3 = Design value from manufacturer
 - 4 = Best Guess / engineering estimate
 - 5 = Calculated, based on material balance
 - 6 = Estimated, based on a published value



Maricopa County

Air Quality Department

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 1001 N. Central Ave., Ste. 595
 Phoenix, AZ 85004
 Phone (602) 506-6790

General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

1- Process ID 7

2- Process Type/Description: F6-SG-01 Emergency Generator (>600HP)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599

5- SCC Code 20200401 (8 digit number)

6- Seasonal Throughput Percent: _____

7- Normal Operating Schedule: _____

8- Typical Hours of Operation (military time) _____

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") _____

10- Used (input) or Produced (output) or Existing(e.g. VMT, acres)

11- Annual Amount (a number) 12.9

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) _____

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information					25
	16	17	18	19	20	21	22	23	24	
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	3.0	HRS OF OPERATION	N	7						39 lbs
NOX	29.0	HRS OF OPERATION	N	7						374 lbs
PM-10	0.30	HRS OF OPERATION	N	7						4 lbs
SOX	6.9 0.5	HRS OF OPERATION	N	5						6 lbs
VOC	44.2 0.8	HRS OF OPERATION	N	5						10 lbs
HAP&NON	0.6 0.03	HRS OF OPERATION	N	6-5						0.4 lbs
PM-2.5	0.30	HRS OF OPERATION	N	7						4 lbs

*** Calculation Method Codes**

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

**** Control Efficiency Reference Codes**

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value

- 6 = State or Local Agency Emission Factor
- 7 = Manufacturer Specifications
- 8 = Site-Specific Emission Factor
- 9 = Vendor Emission Factor
- 10 = Trade Group Emission Factor



Maricopa County

Air Quality Department

Emission Inventory Unit
 1001 N. Central Ave., Ste. 595
 Phoenix, AZ 85004
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General Process Form 2014

Permit number(s) **970053**

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

1- Process ID 8
 2- Process Type/Description: CH2 North Emergency Generator (C2-SG-01) (>600HP)

3- Stack ID(s) (only if required on Stack Form) _____
 4- Process TIER Code: 020599
 5- SCC Code 20200401 (8 digit number)
 6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
 7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52
 8- Typical Hours of Operation (military time) Start 00:00 End 23:59
 9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") INTERNAL COMBUSTION
 Used (input) or Produced (output) or Existing (e.g. VMT, acres)
 11- Annual Amount (a number) 13.5
 12- Fuel Sulfur Content (in percent) 0.0150 %
 13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION
 14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information				25	
	16	17	18	19	20	21	22	23		24
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	3.9	HRS OF OPERATION	N	7						53 lbs
NOX	64.5	HRS OF OPERATION	N	7						871 lbs
PM-10	1.95	HRS OF OPERATION	N	7						26 lbs
SOX	6.9	HRS OF OPERATION	N	5						12 lbs
VOC	14.2	HRS OF OPERATION	N	5						22 lbs
HAP&NON	1.2	HRS OF OPERATION	N	6-5						0.8 lbs
PM-2.5	1.95	HRS OF OPERATION	N	7						26 lbs

- * Calculation Method Codes**
- 1 = Continuous Emissions Monitoring Measurements
 - 2 = Best Guess/Engineering Judgement
 - 3 = Material Balance
 - 4 = Source Test Measurements (Stack Test)
 - 5 = AP-42/FIRE Method or Emission Factor
- ** Control Efficiency Reference Codes**
- 1 = Tested efficiency / EPA reference method
 - 2 = Tested efficiency / other source test method
 - 3 = Design value from manufacturer
 - 4 = Best Guess / engineering estimate
 - 5 = Calculated, based on material balance
 - 6 = Estimated, based on a published value



Maricopa County

Air Quality Department

Emission Inventory Unit
1001 N. Central Ave., Ste. 595
Phoenix, AZ 85004
Phone (602) 506-6790

General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

1- Process ID 9
2- Process Type/Description: CH2 North Emergency Generator (G2-SG-02) (>600HP)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599 FUEL COMB. INDUSTRIAL: Internal Combustion

5- SCC Code 20200401 (8 digit number) INDUSTRIAL: LG. BORE ENGINE: DIESEL

6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %

7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52

8- Typical Hours of Operation (military time) Start 00:00 End 23:59 RUN TIME HOURS

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") _____

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres) _____

11- Annual Amount (a number) 13.9 12- Fuel Sulfur Content (in percent) 0.0150 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) _____ HRS OF OPERATION

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information					25
	16	17	18	19	20	21	22	23	24	
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	3.9	HRS OF OPERATION	N	7						54 lbs
NOX	64.5	HRS OF OPERATION	N	7						897 lbs
PM-10	1.95	HRS OF OPERATION	N	7						27 lbs
SOX	6.9	HRS OF OPERATION	N	5						13 lbs
VOC	14.2	HRS OF OPERATION	N	5						22 lbs
HAP&NON	1.2	HRS OF OPERATION	N	6.5						1 lbs
PM-2.5	1.6	HRS OF OPERATION	N	7						27 lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
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- 6 = Estimated, based on a published value



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1- Process ID 10
 2- Process Type/Description: CH2 North Emergency Generator (C2-SG-03) (>600HP)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599

5- SCC Code 20200401 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %

7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52

8- Typical Hours of Operation (military time) Start 00:00 End 23:59

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") RUN TIME HOURS

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 11.0 12- Fuel Sulfur Content (in percent) 0.0150 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information					25
	16	17	18	19	20	21	22	23	24	
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	5.9	HRS OF OPERATION	N	7						65 lbs
NOX	55.1	HRS OF OPERATION	N	7						606 lbs
PM-10	0.36	HRS OF OPERATION	N	7						4 lbs
SOX	6.9	HRS OF OPERATION	N	5						15 lbs
VOC	14.2	HRS OF OPERATION	N	5						25 lbs
HAP&NON PM-2.5	1.7	HRS OF OPERATION	N	6.5						1 lbs
	0.36	HRS OF OPERATION	N	7						4 lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
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1- Process ID 11
2- Process Type/Description: RODI Generator (RODI-EG-01) (>600HP)

3- Stack ID(s) (only if required on Stack Form) _____
4- Process TIER Code: 020599
5- SCC Code 20200401 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52

8- Typical Hours of Operation (military time) Start 00:00 End 23:59
9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") RUN TIME HOURS
10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 10.8
12- Fuel Sulfur Content (in percent) 0.0150 %
13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION
14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Emission Factor (EF) Information				Control Device Information				25		
15	16	17	18	19	20	21	22		23	24
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	3.0	HRS OF OPERATION	N	7						32 lbs
NOX	29.0	HRS OF OPERATION	N	7						313 lbs
PM-10	0.30	HRS OF OPERATION	N	7						3 lbs
SOX	6.9	HRS OF OPERATION	N	5						5 lbs
VOC	44.2	HRS OF OPERATION	N	5						9 lbs
HAP&NON	0.6	HRS OF OPERATION	N	6.5						0.3 lbs
PM-2.5	0.30	HRS OF OPERATION	N	7						3 lbs

- * Calculation Method Codes
- 1 = Continuous Emissions Monitoring Measurements
 - 2 = Best Guess/Engineering Judgement
 - 3 = Material Balance
 - 4 = Source Test Measurements (Stack Test)
 - 5 = AP-42/FIRE Method or Emission Factor
- ** Control Efficiency Reference Codes
- 1 = Tested efficiency / EPA reference method
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 - 3 = Design value from manufacturer
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1- Process ID 12
 2- Process Type/Description: CH4 Generator (C4-EG-01) (>600HP)

3- Stack ID(s) (only if required on Stack Form) _____
 4- Process TIER Code: 020599
 5- SCC Code 20200401 (8 digit number)
 6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
 7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year _____ Weeks/Year 52
 8- Typical Hours of Operation (military time) Start 00:00 End 23:59 RUN TIME HOURS
 9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") _____
 10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)
 11- Annual Amount (a number) 111.9 12- Fuel Sulfur Content (in percent) 0.0150 %
 13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) _____ HRS OF OPERATION
 14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information				25	
	16	17	18	19	20	21	22	23		24
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	0.7	HRS OF OPERATION	N	7						78 lbs
NOX	19.0	HRS OF OPERATION	N	7						2,126 lbs
PM-10	0.83	HRS OF OPERATION	N	7						93 lbs
SOX	6.9 0.3	HRS OF OPERATION	N	5						34 lbs
VOC	11.2 0.5	HRS OF OPERATION	N	5						56 lbs
HAP&NON	0.4,0.02	HRS OF OPERATION	N	6,5						2 lbs
PM-2.5	0.83	HRS OF OPERATION	N	7						93 lbs

- * Calculation Method Codes
 1 = Continuous Emissions Monitoring Measurements
 2 = Best Guess/Engineering Judgement
 3 = Material Balance
 4 = Source Test Measurements (Stack Test)
 5 = AP-42/FIRE Method or Emission Factor
- ** Control Efficiency Reference Codes
 1 = Tested efficiency / EPA reference method
 2 = Tested efficiency / other source test method
 3 = Design value from manufacturer
 4 = Best Guess / engineering estimate
 5 = Calculated, based on material balance
 6 = Estimated, based on a published value



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1- Process ID 13
2- Process Type/Description: CH6 Generator (C6-EG-1)>600HP

3- Stack ID(s) (only if required on Stack Form) _____
4- Process TIER Code: 020599
5- SCC Code 20200401 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52

8- Typical Hours of Operation (military time) Start 00:00 End 23:59 RUN TIME HOURS
9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled")
10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 18.5
12- Fuel Sulfur Content (in percent) 0.0150 %
13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION
14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units)

15	Emission Factor (EF) Information				Control Device Information				25	
	16	17	18	19	20	21	22	23		24
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	8.0	HRS OF OPERATION	N	7						148 lbs
NOX	46.6	HRS OF OPERATION	N	7						862 lbs
PM-10	0.66	HRS OF OPERATION	N	7						12 lbs
SOX	6.9	HRS OF OPERATION	N	5						11 lbs
VOC	14.2	HRS OF OPERATION	N	5						20 lbs
HAP&NON	0.8	HRS OF OPERATION	N	6.5						1 lbs
PM-2.5	0.66	HRS OF OPERATION	N	7						12 lbs

- * Calculation Method Codes
- 1 = Continuous Emissions Monitoring Measurements
 - 2 = Best Guess/Engineering Judgement
 - 3 = Material Balance
 - 4 = Source Test Measurements (Stack Test)
 - 5 = AP-42/FIRE Method or Emission Factor
- ** Control Efficiency Reference Codes
- 1 = Tested efficiency / EPA reference method
 - 2 = Tested efficiency / other source test method
 - 3 = Design value from manufacturer
 - 4 = Best Guess / engineering estimate
 - 5 = Calculated, based on material balance
 - 6 = Estimated, based on a published value



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1- Process ID 14
 2- Process Type/Description: CH7 Generator (>600HP) (C7-EG-01)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599 FUEL COMB. INDUSTRIAL: Internal Combustion

5- SOCC Code 20200401 (8 digit number) INDUSTRIAL: I.G. BORE ENGINE: DIESEL

6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
 Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52

7- Typical Hours of Operation (military time) Start 00:00 End 23:59 RUN TIME HOURS

8- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") Vehicle miles traveled

9- Used (input) or Produced (output) or Existing (e.g. VMT, acres) 12- Fuel Sulfur Content (in percent) 0.0150 %

10- Annual Amount (a number) 12.1 13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION

11- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information					25
	16	17	18	19	20	21	22	23	24	
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	1.5	HRS OF OPERATION	N	7						18 lbs
NOX	14.3	HRS OF OPERATION	N	7						173 lbs
PM-10	0.23	HRS OF OPERATION	N	7						3 lbs
SOX	6.9	HRS OF OPERATION	N	5						4 lbs
VOC	11.2	HRS OF OPERATION	N	5						6 lbs
HAP&NON	0.4	HRS OF OPERATION	N	6-5						0.2 lbs
PM-2.5	0.23	HRS OF OPERATION	N	7						3 lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
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- 6 = Estimated, based on a published value



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1- Process ID 15
 2- Process Type/Description: CH7 Generator (>600HP) (C7-SG-02)

3- Stack ID(s) (only if required on Stack Form) _____
 4- Process TIER Code: 020599
 FUEL COMB. INDUSTRIAL: Internal Combustion
 INDUSTRIAL: LG. BORE ENGINE: DIESEL

5- SCC Code 20200401 (8 digit number)
 Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
 Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52

6- Seasonal Throughput Percent: _____
 7- Normal Operating Schedule: _____
 8- Typical Hours of Operation (military time) Start 00:00 End 23:59
 RUN TIME HOURS

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") RUN TIME HOURS

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)
 11- Annual Amount (a number) 29.30 12- Fuel Sulfur Content (in percent) 0.0150 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION
 14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information				25	
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency		24 Efficiency Reference Code**
CO	3.9	HRS OF OPERATION	N	7						114 lbs
NOX	64.5	HRS OF OPERATION	N	7						1,890 lbs
PM-10	1.95	HRS OF OPERATION	N	7						57 lbs
SOX	6.9 0.9	HRS OF OPERATION	N	5						26 lbs
VOC	14.2 1.6	HRS OF OPERATION	N	5						47 lbs
HAP&NON	1.2 0.06	HRS OF OPERATION	N	6.5						2 lbs
PM-2.5	1.95	HRS OF OPERATION	N	7						57 lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
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- 1- Process ID 16
- 2- Process Type/Description: CH7 Generator (>600HP) (C7-SG-01)

- 3- Stack ID(s) (only if required on Stack Form) _____
- 4- Process TIER Code: 020599
- 5- SCC Code 20200401 (8 digit number)
- 6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
- 7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52
- 8- Typical Hours of Operation (military time) Start 00:00 End 23:59
- 9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") INTERNAL COMBUSTION
- 10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)
- 11- Annual Amount (a number) 12.70
- 12- Fuel Sulfur Content (in percent) 0.0150 %
- 13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION
- 14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information				25	
	16	17	18	19	20	21	22	23		24
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	3.9	HRS OF OPERATION	N	7						50 lbs
NOX	64.5	HRS OF OPERATION	N	7						819 lbs
PM-10	1.95	HRS OF OPERATION	N	7						25 lbs
SOX	6.9	HRS OF OPERATION	N	5						11 lbs
VOC	14.2	HRS OF OPERATION	N	5						20 lbs
HAP&NON PM-2.5	1.2	HRS OF OPERATION	N	6.5						1 lbs
	1.95	HRS OF OPERATION	N	7						25 lbs

* Calculation Method Codes

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- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

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- 2 = Tested efficiency / other source test method
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1- Process ID 17

2- Process Type/Description: CH8 Generator (>600HP) (C8-EG-01)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599

5- SCC Code 20200401 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %

7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52

8- Typical Hours of Operation (military time) Start 00:00 End 23:59 RUN TIME HOURS

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") _____

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 23.30 12- Fuel Sulfur Content (in percent) 0.0150 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) _____

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information				Estimated Actual Emissions
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency	
CO	0.5	HRS OF OPERATION	N	7					12 lbs
NOX	8.1	HRS OF OPERATION	N	7					188 lbs
PM-10	0.08	HRS OF OPERATION	N	7					2 lbs
SOX	0.3	HRS OF OPERATION	N	5					7 lbs
VOC	0.5	HRS OF OPERATION	N	5					12 lbs
HAP&NON	0.02	HRS OF OPERATION	N	5					0.5 lbs
PM-2.5	0.08	HRS OF OPERATION	N	7					2 lbs

- * Calculation Method Codes
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- 1- Process ID 18
- 2- Process Type/Description: CH8 Generator (>600HP) (CG-EG-02)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599

5- SCC Code: 20200401 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 20 %

7- Normal Operating Schedule: Hours/Day 1

8- Typical Hours of Operation (military time) Start 00:00

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled")

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 22

12- Fuel Sulfur Content (in percent) 0.0150 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.)

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units)

15	Emission Factor (EF) Information				Control Device Information						25
	16	17	18	19	20	21	22	23	24	25	
Pollutant	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions	
CO	0.5	HRS OF OPERATION	N	7						11 lbs	
NOX	8.1	HRS OF OPERATION	N	7						177 lbs	
PM-10	0.08	HRS OF OPERATION	N	7						2 lbs	
SOX	0.3	HRS OF OPERATION	N	5						7 lbs	
VOC	0.5	HRS OF OPERATION	N	5						12 lbs	
HAP&NON	0.02	HRS OF OPERATION	N	5						0.4 lbs	
PM-2.5	0.08	HRS OF OPERATION	N	7						2 lbs	

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value



Maricopa County

Air Quality Department

Emission Inventory Unit
 1001 N. Central Ave., Ste. 595
 Phoenix, AZ 85004
 Phone (602) 506-6790

General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

1- Process ID 50-19

2- Process Type/Description: CH2 Emergency Generator C2-EG-1 (<600 HP)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599

5- SCC Code 20200102 (8 digit number)

6- Seasonal Throughput Percent: _____

7- Normal Operating Schedule: _____

8- Typical Hours of Operation (military time) _____

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") _____

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 13.4

12- Fuel Sulfur Content (in percent) 0.0150 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) _____

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information					Control Device Information					Estimated Actual Emissions
	15	16	17	18	19	20	21	22	23	24	
	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**		
CO	0.5		N	7							7 lbs
NOX	8.7		N	7							117 lbs
PM-10	0.40		N	7							5 lbs
SOX	39.7		N	5							3 lbs
VOC	49.3		N	5							12 lbs
HAP&NON	0.2		N	6-5							0.1 lbs
PM-2.5	0.40		N	7							5 lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value



Maricopa County
Air Quality Department

Emission Inventory Unit
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Phoenix, AZ 85004
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General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

1- Process ID 51-20
2- Process Type/Description: CH3 Emergency Generator C3-EG-1 (<600 HP)

3- Stack ID(s) (only if required on Stack Form) _____
4- Process TIER Code: 020599
5- SCC Code 20200102 (8 digit number)
6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52
8- Typical Hours of Operation (military time) Start 00:00 End 23:59 RUN TIME HOURS
9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") FUEL COMB. INDUSTRIAL: Internal Combustion
10- Used (input) or Produced (output) or Existing (e.g. VMT, acres) INDUSTRIAL: DISTILLATE OIL: RECIP
11- Annual Amount (a number) 13.6 12- Fuel Sulfur Content (in percent) 0.0150 %
13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION
14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information				Estimated Actual Emissions	
	Emission Factor (EF) (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency		Efficiency Reference Code**
CO	0.2	HRS OF OPERATION	N	7						3 lbs
NOX	1.6	HRS OF OPERATION	N	7						22 lbs
PM-10	0.03	HRS OF OPERATION	N	7						0.4 lbs
SOX	39.7	HRS OF OPERATION	N	5						1 lbs
VOC	49.3	HRS OF OPERATION	N	5						8 lbs
HAP&NON	0.4	HRS OF OPERATION	N	6-5						0.1 lbs
PM-2.5	0.03	HRS OF OPERATION	N	7						0.4 lbs

- * Calculation Method Codes
1 = Continuous Emissions Monitoring Measurements
2 = Best Guess/Engineering Judgement
3 = Material Balance
4 = Source Test Measurements (Stack Test)
5 = AP-42/FIRE Method or Emission Factor
- ** Control Efficiency Reference Codes
1 = Tested efficiency / EPA reference method
2 = Tested efficiency / other source test method
3 = Design value from manufacturer
4 = Best Guess / engineering estimate
5 = Calculated, based on material balance
6 = Estimated, based on a published value



Maricopa County

Air Quality Department

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Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See instructions for requirements for information to be deemed confidential

1- Process ID 62-21

2- Process Type/Description: CH3 Emergency Generator C3-SG-1 (<600HP)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599

5- SCC Code 20200102 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %

7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Yee 52

8- Typical Hours of Operation (military time) Start 00:00 End 23:59

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") RUN TIME HOURS

10- Used (input) or Produced (output) or Existing(e.g. VMT, acres)

11- Annual Amount (a number) 10.4 12- Fuel Sulfur Content (in percent) 0.0150 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information					Estimated Actual Emissions
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency	24 Efficiency Reference Code**	
CO	1.8		N	7						19 lbs
NOX	6.6		N	7						69 lbs
PM-10	0.22		N	7						2 lbs
SOX	39.7		N	5						2 lbs
VOC	49.3		N	5						14 lbs
HAP&NON	0.3		N	6-5						0.2 lbs
PM-2.5	0.22		N	7						2 lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 6 = State or Local Agency Emission Factor
- 7 = Manufacturer Specifications
- 8 = Site-Specific Emission Factor
- 9 = Vendor Emission Factor
- 10 = Trade Group Emission Factor
- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value



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General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See instructions for requirements for information to be deemed confidential

- 1- Process ID 5322
- 2- Process Type/Description: Emergency Generator ND-EG-1 (<600HP)

- 3- Stack ID(s) (only if required on Stack Form) _____
- 4- Process TIER Code: 020599
- 5- SCC Code 20200102 (8 digit number)
- 6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
- 7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52
- 8- Typical Hours of Operation (military time) Start 00:00 End 23:59
- 9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") RUN TIME HOURS
- 10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)
- 11- Annual Amount (a number) 27.1
- 12- Fuel Sulfur Content (in percent) 0.0150 %
- 13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION
- 14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	Emission Factor (EF) Information				Control Device Information				25	
	16 Pollutant	17 Emission Factor (EF) (number)	18 EF Units (lbs per)	19 Controlled EF? Yes or No	20 Calculation Method Code*	21 Capture % Efficiency	22 Primary Control Device ID	23 Secondary Control Device ID		24 Control Device(s) % Efficiency
CO	0.2	HRS OF OPERATION	N	7						5 lbs
NOX	1.6	HRS OF OPERATION	N	7						43 lbs
PM-10	0.03	HRS OF OPERATION	N	7						1 lbs
SOX	39.7	HRS OF OPERATION	N	5						3 lbs
VOC	49.3	HRS OF OPERATION	N	5						16 lbs
HAP&NON	0.01	HRS OF OPERATION	N	6-5						0.3 lbs
PM-2.5	0.03	HRS OF OPERATION	N	7						1 lbs

- * Calculation Method Codes
- 1 = Continuous Emissions Monitoring Measurements
 - 2 = Best Guess/Engineering Judgement
 - 3 = Material Balance
 - 4 = Source Test Measurements (Stack Test)
 - 5 = AP-42/FIRE Method or Emission Factor

- 6 = State or Local Agency Emission Factor
- 7 = Manufacturer Specifications
- 8 = Site-Specific Emission Factor
- 9 = Vendor Emission Factor
- 10 = Trade Group Emission Factor

- ** Control Efficiency Reference Codes
- 1 = Tested efficiency / EPA reference test method
 - 2 = Tested efficiency / other source test method
 - 3 = Design value from manufacturer
 - 4 = Best Guess / engineering estimate
 - 5 = Calculated, based on material balance
 - 6 = Estimated, based on a published value



Maricopa County

Air Quality Department

Emission Inventory Unit
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General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See instructions for requirements for information to be deemed confidential

1- Process ID 64.23

2- Process Type/Description: CH4 Emergency Generator C4-SG-2 (<600 HP)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599

5- SCC Code 20200102 (8 digit number)

6- Seasonal Throughput Percent: Dec-Feb 20 %

7- Normal Operating Schedule: Hours/Day 1

8- Typical Hours of Operation (military time) Start 00:00

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") RUN TIME HOURS

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 32.3

12- Fuel Sulfur Content (in percent) 0.0150 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information					Estimated Actual Emissions
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency	24 Efficiency Reference Code**	
CO	1.8	HRS OF OPERATION	N	7						58 lbs
NOX	6.6	HRS OF OPERATION	N	7						213 lbs
PM-10	0.22	HRS OF OPERATION	N	7						7 lbs
SOX	39.7	HRS OF OPERATION	N	5						6 lbs
VOC	49.3	HRS OF OPERATION	N	5						42 lbs
HAP&NON	0.02	HRS OF OPERATION	N	6.5						1 lbs
PM-2.5	0.22	HRS OF OPERATION	N	7						7 lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 6 = State or Local Agency Emission Factor
- 7 = Manufacturer Specifications
- 8 = Site-Specific Emission Factor
- 9 = Vendor Emission Factor
- 10 = Trade Group Emission Factor
- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value



Maricopa County

Air Quality Department

Emission Inventory Unit
1001 N. Central Ave., Ste. 595
Phoenix, AZ 85004
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General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

- 1- Process ID 65 24
- 2- Process Type/Description: East Fire Pump Emergency Generator (<600HP)

- 3- Stack ID(s) (only if required on Stack Form) _____
- 4- Process TIER Code: 020599
- 5- SCC Code 20200102 (8 digit number)
- 6- Seasonal Throughput Percent: _____
- 7- Normal Operating Schedule: Dec-Feb 20 %
Hours/Day 1
- 8- Typical Hours of Operation (military time) Start 00:00 End 23:59
- 9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") INTERNAL COMBUSTION
- 10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)
- 11- Annual Amount (a number) 26.6
- 12- Fuel Sulfur Content (in percent) 0.0150 %
- 13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) HRS OF OPERATION
- 14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information				Estimated Actual Emissions	
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency		24 Efficiency Reference Code**
CO	1.6	HRS OF OPERATION	N	7						42 lbs
NOX	7.4	HRS OF OPERATION	N	7						196 lbs
PM-10	0.53	HRS OF OPERATION	N	7						14 lbs
SOX	39.7	HRS OF OPERATION	N	5						3 lbs
VOC	49.3	HRS OF OPERATION	N	5						16 lbs
HAP&NON PM-2.5	0.01	HRS OF OPERATION	N	6-5						0.3 lbs
	0.53	HRS OF OPERATION	N	7						14 lbs

- * Calculation Method Codes
- 1 = Continuous Emissions Monitoring Measurements
 - 2 = Best Guess/Engineering Judgement
 - 3 = Material Balance
 - 4 = Source Test Measurements (Stack Test)
 - 5 = AP-42/FIRE Method or Emission Factor

- ** Control Efficiency Reference Codes
- 1 = Tested efficiency / EPA reference method
 - 2 = Tested efficiency / other source test method
 - 3 = Design value from manufacturer
 - 4 = Best Guess / engineering estimate
 - 5 = Calculated, based on material balance
 - 6 = Estimated, based on a published value



Maricopa County

Air Quality Department

Emission Inventory Unit
 1001 N. Central Ave., Ste. 595
 Phoenix, AZ 85004
 Phone (602) 506-6790

General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See instructions for requirements for information to be deemed confidential

1- Process ID 66 25
 2- Process Type/Description: West Fire Pump Emergency Generator (<600HP)

3- Stack ID(s) (only if required on Stack Form) _____
 4- Process TIER Code: 020599
 5- SCC Code 20200102 (8 digit number)
 FUEL COMB. INDUSTRIAL: Internal Combustion
 INDUSTRIAL: DISTILLATE OIL: RECIPI

6- Seasonal Throughput Percent: Dec-Feb 20 % Mar-May 10 % Jun-Aug 30 % Sep-Nov 40 %
 7- Normal Operating Schedule: Hours/Day 1 Days/Week 1 Hours/Year 52 Weeks/Year 52
 8- Typical Hours of Operation (military time) Start 00:00 End 23:59 RUN TIME HOURS

9. Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") _____

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) 17.2 12- Fuel Sulfur Content (in percent) 0.0150 %

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) _____

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Pollutant	Emission Factor (EF) Information				Control Device Information				Estimated Actual Emissions	
	16 Emission Factor (EF) (number)	17 EF Units (lbs per)	18 Controlled EF? Yes or No	19 Calculation Method Code*	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID	23 Control Device(s) % Efficiency		24 Efficiency Reference Code**
CO	1.6		N	7						28 lbs
NOX	7.4		N	7						127 lbs
PM-10	0.53		N	7						9 lbs
SOX	39.7	0.1	N	5						9 lbs
VOC	49.3	0.6	N	5						10 lbs
HAP&NON	0.1	0.01	N	6.5						0.2 lbs
PM-2.5	0.53		N	7						9 lbs

*** Calculation Method Codes**

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

**** Control Efficiency Reference Codes**

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value



Maricopa County Air Quality Department

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General Process Form 2014

Permit number(s) 970053

Place an X in any gray cell to mark data requested to be held confidential. See instructions for requirements for information to be deemed confidential

- 1- Process ID 1725
- 2- Process Type/Description: _____

Cooling Towers (EC)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 140699

5- SCC Code: 38500101 (8 digit number)

6- Seasonal Throughput Percent: _____

7- Normal Operating Schedule: _____

8- Typical Hours of Operation (military time) Start 00:00 End 23:59

9- Emissions based on (name of material or other parameter, e.g. "rock", "glass", "vehicle miles traveled") _____

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) Q = 754,611,076.80 ; TDS = 3685.32

12- Fuel Sulfur Content (in percent) _____ %

13- Units of Measure (for example, tons, gallons, million cu ft, acres, units produced, etc.) MM GALS - PM/Annual Ave gal/monthly; PPM

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Miscellaneous: Cooling Towers

Cooling Towers: PROC Cooling: Mach Draft _____

Mar-May 20 % Jun-Aug 40 % Sep-Nov 30 %

Days/Week 7 Hours/Year 8760 Weeks/Year 52

End 23:59

Water Flow Rate W/TDS = 3281 PM: Water Flow Rate (Q) X TDS: Ref. Permit Cond. #2c

HAP&NQN: based on mass balance (Sodium Bromide used in CT)

15	16	Emission Factor (EF) Information				Control Device Information				25		
		Emission Factor (number)	EF Units (lbs per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency		Efficiency Reference Code**	Estimated Actual Emissions
PM-10	10-5.29E-11	MM GALS lb/yr	N Y	6 6				0.002			1,771.88	lbs
PM-2.5	2.08386E-5.29E-11	MM GALS lb/yr	N Y	6				0.002			1,771.88	lbs
HAP&NQN	0.14	lb bromine/lb sodium bromide	Y	3				0.002			140.00	lbs
												lbs
												lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgment
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value



Maricopa County Air Quality Department

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Permit number(s) 970053

General Process Form 2014

Place an X in any gray cell to mark data requested to be held confidential. See instructions for requirements for information to be deemed confidential

- 1- Process ID 18.27
- 2- Process Type/Description: _____

Cooling Towers (MSB)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: _____

5- SCC Code: 38500101 140699 (8 digit number)

6- Seasonal Throughput Percent: _____

7- Normal Operating Schedule: _____

8- Typical Hours of Operation (military time) Start 00:00

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") _____

10- Used (input) or _____ Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount (a number) Q = 199,901,098.80 ; TDS = 3,840.11

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) MM GALS PM (Annual Ave gal/month; PPM)

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Miscellaneous: Cooling Towers

Cooling Towers: PROC Cooling: Mech Drat _____

Mar-May 20 % Jun-Aug 40 % Sep-Nov 30 %

Days/Week 7 Hours/Year 8760 Weeks/Year 52

End 23:59

Water Flow Rate w/ TDS = 3281 PPM; Water Flow Rate (Q) X TDS; Ref. Permit Cond. #2c
HAP&NON: based on mass balance (Sodium Bromide used in CT)

15	16	Emission Factor (EF) Information			Control Device Information				25			
		Emission Factor (number)	EF Units (lbs per)	Controlled EF? Yes or No	19 Calculation Method Code	20 Capture % Efficiency	21 Primary Control Device ID	22 Secondary Control Device ID		23 Control Device(s) % Efficiency	24 Efficiency Reference Code**	Estimated Actual Emissions
PM-10	19.5,29E-11	MM GALS lb/yr	N Y	6 6				0.001			246.30	lbs
PM-2.5	1.37359, 5.29E-11	MM GALS lb/yr	N Y	6				0.001			246.30	lbs
HAP&NON	0.14	lb bromoforn/lb sodium bromide	Y	3				0.001			140.00	lbs
												lbs
												lbs

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value



Maricopa County Air Quality Department

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1- Process ID 28 28 Cooling Towers (CTR) Permit number(s) 970053

2- Process Type/Description: _____

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 140899 _____

5- SCC Code: 38500101 _____ (8 digit number)

6- Seasonal Throughput Percent: _____

7- Normal Operating Schedule: _____

8- Typical Hours of Operation (military time) _____

9- Emissions based on (name of material or other parameter, e.g. "rock", "glass", "vehicle miles traveled") _____

10- Used (input) or _____ Produced (output) or _____ Existing(e.g. VMT, acres)

11- Annual Amount (a number) _____ $Q = 291,384,676.8$; TDS = 2,528.68

12- Fuel Sulfur Content (in percent) _____

13- Units of Measure (for example: tons, gallons, million cu ft, acres, units produced, etc.) _____

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

15	16		17		18	19	20				21		22		23		24	25
	Pollutant	Emission Factor (EF) (number)	MM GALS lb/yr	MM GALS lb/yr			Controlled EF? Yes or No	Calculation Method Code*	Capture %	Primary Control Device ID	Secondary Control Device ID	Control Device(s) Efficiency	% Efficiency	Efficiency Reference Code**	Estimated Actual Emissions			
PM-10	19.529E-11	MM GALS lb/yr			N Y	6				0.0005			119.08	lbs				
PM-2.5	0.36529E-11	MM GALS lb/yr			N Y	6				0.0005			119.08	lbs				
HAP&NON	0.14	lb brominornlb sodium bromide			Y	3				0.0005			140.00	lbs				

* Calculation Method Codes

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess/Engineering Judgement
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42/FIRE Method or Emission Factor

** Control Efficiency Reference Codes

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best Guess / engineering estimate
- 5 = Calculated, based on material balance
- 6 = Estimated, based on a published value



Maricopa County

Air Quality Department

Evaporative Process Form 2014

Permit number(s) 970053

Emission Inventory Unit
1001 N. Central Ave., Ste. 595
Phoenix, AZ 85004
Phone (602) 506-6790

Place an X in any gray cell to mark data requested to be held confidential. See instructions for requirements for information to be deemed confidential

1- Process Type/Description: Chandler Sitewide

2- Process TIER Code: 080599 Solvent Use: Other Industrial

3- Seasonal Throughput Percent: Dec-Feb 25 % Mar-May 25 % Jun-Aug 25 % Sep-Nov 25 %

4- Normal Operating Schedule: Hours/Day 24 Days/Week 7 Hours/Year 8760 Weeks/Year 52

5- Typical Hours of Operation (military time) Start 00:00 End 23:59

6	7	8	9	10	11	12	13	14	15				
Process ID	Stack ID(s)	Material Type	Annual Usage Input	lb or gal	VOC, HAP&NON or NHx	Emission Factor	EF Units (lbs per pollutant)*	Pounds of pollutant* sent	Capture % Efficiency	Control ID	Control Efficiency %	Control Efficiency Code**	Estimated Emissions (lbs/yr)
101		IPA WIPES 6%	7465	LB	VOC	0.06	LB	100	%		0	%	448
102		IPA WIPES 100%	1209	LB	VOC	1	LB	100	%		0	%	1209
103		IPA (PROCESS/NONPROCESS)	262	LB	VOC	1	LB	100	%		0	%	262
104		FUGITIVE LAB CHEMISTRIES	2687	LB	VOC	0.95 0.72	LB	100	%		0	%	1933
105		FUGITIVE LAB CHEMISTRIES	140	LB	HAP&NON	0.93 0.62	LB	100	%		0	%	87

NOTE: Do NOT change pre-printed Process ID numbers. See the instructions for information on how to delete materials that are no longer used, or to assign Process ID numbers for new materials.

*If you have off-site recycling/disposal of any of the materials listed above, you must complete an Off-Site Recycling/Disposal Form to receive credit for reduced emissions.

**** Control Efficiency Reference Codes**

- 1 = Tested efficiency / EPA reference method
- 4 = Best guess / engineering estimate

- 2 = Tested efficiency / other source test method
- 5 = Calculated based on material balance

- 3 = Design value from manufacturer
- 6 = Estimated, based on a published value



Maricopa County
Air Quality Department

Emission Inventory Unit
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Evaporative Process Form 2014

Permit number(s) **970053**

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1- Process Type/Description: Process Encapsulation In Chandler Assembly Test; CH4

2- Process TIER Code: 080599 Solvent Use: Other Industrial

3- Seasonal Throughput Percent: Dec-Feb 25 % Mar-May 25 % Jun-Aug 25 % Sep-Nov 25 %

4- Normal Operating Schedule: Hours/Day 24 Days/Week 7 Hours/Year 8760 Weeks/Year 52

5- Typical Hours of Operation (military time) Start 00:00 End 23:59

6	7	8	9	10	11	12	13	14	15				
Process ID	Stack ID(s)	Material Type	Annual Usage Input	lb or gal	VOC, HAP&NO N or NHx	Emission Factor	EF Units (lbs per)	Pounds of pollutant* sent	Capture % Efficiency	Control ID	Control Efficiency %	Control Efficiency Code**	Estimated Emissions (lbs/yr)
201		FLUX	1850	LB	VOC	0.2	LB		100 %		0 %		398
202		C4 UNDERFILL	4612	LB	VOC	0.2 0.01	LB		100 %		0 %		68
203		SOLDER PASTE	741	LB	VOC	0.3 0.2	LB		100 %		0 %		178
205		ADHESIVE	1111	LB	VOC	0.4 0.2	LB		100 %		0 %		167
260		SOLVENTS	3161	LB	VOC	1	LB		100 %		0 %		3161
207		EPOXY		LB	VOC	0.4	LB		100 %		0 %		110

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** Control Efficiency Reference Codes
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Maricopa County

Air Quality Department

Evaporative Process Form 2014

Permit number(s) 970053

Emission Inventory Unit
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Phone (602) 506-6790

Place an X in any gray cell to mark data requested to be held confidential. See Instructions for requirements for information to be deemed confidential

1- Process Type/Description SUBSTRATE PACKAGING TECHNOLOGY DEVELOPMENT (SPTD), CH-1, CH8

2- Process TIER Code: 080599 SOLVENT USE: OTHER INDUSTRIAL

3- Seasonal Throughput Percent: Dec-Feb 25 % Mar-May 25 % Jun-Aug 25 % Sep-Nov 25 %

4- Normal Operating Schedule: Hours/Day 24 Days/Week 7 Hours/Year 8760 Weeks/Year 52

5- Typical Hours of Operation (military time) Start 00:00 End 23:59

6	7	8	9	10	11	12	13	14	15				
Process ID	Stack ID(s)	Material Type	Annual Usage Input	lb or gal	VOC, HAP&NON or NHx	Emission Factor	EF Units (lbs per)	Pounds of pollutant* sent	Capture % Efficiency	Control ID	Control % Efficiency	Control Efficiency Code**	Estimated Emissions (lbs/yr)
301	9 & 11	AMMONIA COMPOUNDS	536	LB	NHx	1	LB	100%	2 & 9	86.9% 0%	2	6	536
304	1 & 8	Glycol Ethers	283.30	LB	VOC	1	LB	100%	1 & 7	0%	4	4	283
305	1 & 8	ETHYLENE GLYCOL	36.00	LB	VOC	1	LB	100%	1 & 7	0%	4	4	36
307	1 & 8	FORMIC ACID	228.00	LB	VOC	1	LB	100%	1 & 7	85%	4	4	228
308	1 & 8	ACETIC ACID	690.50	LB	VOC	1	LB	100%	1 & 7	85%	4	4	691
311	1 & 8	NICKEL	0.00	LB	HAP&NON	1	LB	100%	1 & 7	0%	4	4	0
312	1 & 8	HCl	579.67	LB	HAP&NON	1	LB	100%	1 & 7	0%	4	4	580
313	1 & 8	METHANOL	372.19	LB	VOC	1	LB	100%	1 & 7	85%	4	4	372
314	1 & 8	FORMALDEHYDE	190.40	LB	HAP&NON VOC	1	LB	100%	1 & 7	9.4%	2	2	190
316	NA	Ethanol	4897.00	LB	VOC	1	LB	100%	2 NA	0%	5	6	4897

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**** Control Efficiency Reference Codes**

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Air Quality Department

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Data Certification Form 2014

Permit number(s) 970053

For EACH pollutant listed, total up all emissions recorded on your General Process and Evaporative Process Forms. Enter these numbers in column 1, "Totals from Process Forms". Report any emissions from accidental releases in column 2. Add the figures in each row across, and enter the result in column 3, "Total Emissions."

Summary of 2014 Annual Emissions: (expressed in pounds)	(1) Totals from Process Forms	(2) + Accidental Releases	(3) =TOTAL EMISSIONS
CO	15,500	0	15,500
NH _x	536	0	536
Lead	0	0	0
HAP&NON	1,520	0	1,520
VOC	16,136	0	16,136
NO _x	27,827	0	27,827
SO _x	311	0	311
PM ₁₀	4,129	0	4,129
PM2.5	4,129	0	4,129

TO COMPLETE YOUR EMISSIONS INVENTORY REPORT:

- Complete the Confidentiality Statement below.
- Sign and date this form where indicated.
- Send the original copy of your completed forms to: Maricopa County Air Quality Dept., Emissions Inventory Unit, 1001 N. Central Avenue, Suite 125, Phoenix, AZ 85004.
- Keep a copy of all forms for your records.

CONFIDENTIALITY STATEMENT:

This annual emissions report contains requests to keep some data confidential.

YES NO

If you check "YES", you must submit documentation and meet certain requirements before your data can be deemed confidential. See enclosed instructions for further details.

CERTIFICATION STATEMENT:

I declare under penalty of perjury that the data (e.g. inputs, emission factors, controls, and annual emission) presented herein represents the best available information and is true, accurate and complete to the best of my knowledge.

5/5/15

(480) 552-2267

Signature of owner/business officer

Date of signature

Telephone number

Daryl W McIlhargie

Corporate Services Manager

Type or print full name of owner/business officer

Type or print full title