



Kirtland Air Force Base

20.11.41 NMAC Construction Permit Application
Emergency Generators and Water Pump Engines
Fire Department

377 MSG/CEIE
Kirtland AFB, New Mexico

OCT 29 '21 AM 11:39

KIRTLAND AIR FORCE BASE

Application for Modification Construction Permit #3031-RV2 Kirtland AFB Fire Department Supplemental Information

Project Description

Kirtland Air Force Base (AFB) is submitting this application for a modification to Air Quality Construction Permit #3031-RV2 from the Albuquerque Environmental Health Department (AEHD) Air Quality Division. Permit #3031-RV2 currently applies to thirteen (13) emergency generators and water pump motors with Process Equipment Unit Numbers 1 - 13 (Unit ID Nos. 19015, 19016, 19019, 19069 through 19076, 19129, and 19130) which provide backup power to the Kirtland AFB Fire Department.

Kirtland AFB is submitting this application to remove the quinquennial stack testing requirement for Unit 13 (Unit ID No. 19130) contained in permit condition I.6.i). Unit 13 is a 1186 horsepower (hp), diesel, emergency engine located at the Kirtland AFB Fire Department. This unit provides emergency power in the event of local utility power failure, and it not subject to federal requirements for stack testing under the National Emissions Standard for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ (40 CFR 63.6580) since it meets the requirements of an Existing Institutional Emergency Stationary Reciprocating Internal Combustion Engine (RICE). Specifically, 40 CFR 63, Subpart ZZZZ, §63.6585(f)(3), exempts Unit 19130 because it does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63, Subpart ZZZZ §63.6640(f)(2)(ii) and (iii), and the Unit does not operate for the purpose specified in 40 CFR 63, Subpart ZZZZ §63.6640(f)(4)(ii). As such, there are no federal requirements to perform stack tests on this unit. Regardless, stack testing on this unit has been performed periodically since its installation over 16 years ago, and all tests have consistently demonstrated compliance with permit requirements. Therefore, Kirtland AFB is submitting this application to eliminate the quinquennial compliance testing requirement, permit condition I.6.i). No other changes are being requested at this time. The following application and forms are provided for completeness, however, the information in them remains unchanged from previous permit applications.

Certification by the applicant's official representative that the information in this application is accurate (as required by 20.11.41.13.B(10) NMAC) is included with the permit application forms in Attachment A. Attachment B contains the completed AEHD permit application checklist to ensure that the required elements have been included in this application. The AEHD permit application review fee checklist is also included in Attachment B.

Although no changes are being requested, hourly, annual, and potential emissions from the emission sources are included in Attachment C. Refer to Attachment D for a map illustrating the locations of the Process Equipment. Refer to Attachment E for a process flow diagram for an internal combustion engine.

Routine preventative maintenance will be conducted on each engine to ensure proper operation. The operators will be responsible for shutting down the generators and engines if there is a malfunction, such as vacuum loss, low oil pressure, overheating, or overly high revolutions per minute. The following recordkeeping and ongoing compliance activities will be performed.

- Kirtland AFB will maintain records of the hours of operation for the generators and fire pump engines;
- Kirtland AFB will calculate annual emissions from the generators and fire pump engines using appropriate emission factors and annual operating hours;
- Kirtland AFB will include emissions and hours of operation from the generators and fire pump engines in an annual emissions report to be submitted to the AEHD to ensure that no exceedances of the 20.11.41 NMAC permit limits occur; and
- Kirtland AFB will maintain organization-required maintenance logs to show that the generators and fire pump engines are in good working condition.

Attachment A – Permit Application Forms

Attachment B – Permit Application Checklist and Notice of Intent to Construct

Attachment C – Emission Calculations

Attachment D – Location Map

Attachment E – Process Flow Diagram

Attachment A

AEHD Permit Application Forms



Albuquerque Environmental Health Department - Air Quality Program

Please mail this application to **P.O. Box 1293, Albuquerque, NM 87103**

or hand deliver between 8:00am - 5:00pm Monday - Friday to:

3rd Floor, Suite 3023 - One Civic Plaza NW, Albuquerque, New Mexico 87103

(505) 768 - 1972 aqd@cabq.gov (505) 768 - 1977 (Fax)



**Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)**

Clearly handwritten or type

Corporate Information

Submission Date: 10/27/2021

1. Company Name U.S. Air Force - Kirtland Air Force Base
2. Street Address 2050 Wyoming Blvd. SE, Suite 116 Zip 87117-5270
3. Company City Kirtland AFB, Albuquerque 4. Company State NM 5. Company Phone (505) 853-1588 6. Company Fax (505) 853-6970
7. Company Mailing Address: 377 MSG/CEIE, 2050 Wyoming Blvd. SE, Suite 116 Zip 87117-5270
8. Company Contact and Title Ms. Melissa Clark, Chief, Environmental Management 9. Phone (505) 853-1588
10. E-mail melissa.clark.8@us.af.mil

Stationary Source (Facility) Information: [Provide a plot plan (legal description/drawing of facility property) with overlay sketch of facility processes; Location of emission points; Pollutant type and distances to property boundaries]

1. Facility Name Kirtland Air Force Base Fire Dept. 2. Street Address KAFB Crash/Fire/Rescue Facility Building 1005 2600 San Mateo SE
3. City Albuquerque 4. State NM 5. Facility Phone (505) 846-5611 6. Facility Fax (505) 853-3314
7. Facility Mailing Address (Local) N/A Zip 87117
8. Latitude - Longitude or UTM Coordinates of Facility Unit ID 19130: UTM-E (m): 355,433.39 UTM-N (m): 3879441.77
9. Facility Contact and Title: Ms. Melissa Clark, Chief Env Mgt. 10. Phone (505) 853-1588 11. E-mail: melissa.clark.8@us.af.mil

General Operation Information (if any further information request does not pertain to your facility, write N/A on the line or in the box)

1. Facility Type (description of your facility operations) Emergency Generators and Fire Water Pumps for Fire Dept. Facilities
2. Standard Industrial Classification (SIC 4 digit #) 9711
3. North American Industry Classification System (NAICS Code #) 928110
4. Is facility currently operating in Bernalillo County. Yes If yes, date of original construction 12/2003
If no, planned startup is / /
5. Is facility permanent Yes If no, give dates for requested temporary operation - from / / through / /
6. Is facility process equipment new No If no, give actual or estimated manufacture or installation dates in the Process Equipment Table.
7. Is application for a modification, expansion, or reconstruction (altering process, or adding, or replacing process equipment, etc.) to an existing facility which will result in a change in emissions No. If yes, give the manufacture date of modified, added, or replacement equipment in the Process Equipment Table modification date column, or the operation changes to existing process/equipment which cause an emission increase.
8. Is facility operation (circle one) [Continuous Intermittent] Batch]

9. Estimated % of production Jan-Mar 25 Apr-Jun 25 Jul-Sept 25 Oct-Dec 25

10. Current or requested operating times of facility 24 hrs/day 7 days/wk 4 wks/mo 12 mos/yr (**up to 200 hrs/yr**)

11. Business hrs 12:00 am to 11:59 pm (24 hrs/day)

12. Will there be special or seasonal operating times other than shown above No If yes, explain _____

13. Raw materials processed N/A

14. Saleable item(s) produced N/A

15. Permitting Action Being Requested

New Permit Permit Modification Technical Permit Revision Administrative Permit Revision

Current Permit #: 3031-RV2 Current Permit #: _____ Current Permit #: _____

**Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)**

PROCESS EQUIPMENT TABLE

(Generator-Crusher-Screen-Conveyor-Boiler-Mixer-Spray Guns-Saws-Sander-Oven-Dryer-Furnace-Incinerator, etc.) Match the Process Equipment Units listed on this Table to the same numbered line if also listed on Emissions & Stack Table (page 6).

Process Equipment Unit	Manufacturer	Model #	Serial #	Manufacture Date	Installation Date	Modification Date	Size or Process Rate (Hp.kW.Btu.ft ³ .lbs.tons.yd ³ .etc.)	Fuel Type
1. Emergency Generator Building 20217 Unit Code 19015	Engine Cummins Generator Cummins	Engine 4BT3.9-G2 Generator 60BT42	Engine 44410787 Generator 1 890288045	Engine 10/1989 Gen. 10/1989	04/1990 (est.)	N/A	102 Hp.	Diesel Fuel
2. Emergency Generator Building 638 Unit Code 19016	Eng. McGraw-Edison Generator Onan	Engine L634 Gen DL6-15/24821D	Engine 11863126762 Generator J850780845	Engine 1985 Generator 1985	1986 (est.)	N/A	51 Hp.	Diesel Fuel
3. Emergency Generator Building 66001 Unit Code 19019	Engine Cummins Generator Onan	Engine 4BT3.9-G2 Generator DGCB	Engine 44985145 Generator B940535125	Engine 02/1994 Gen. 02/1994	08/1994 (est.)	N/A	102 Hp.	Diesel Fuel
4. Emergency Water Pump Engine Building 1021 Unit Code 19069	Cummins	NT-855-F3	18104461	11/1982	04/1983	N/A	340 Hp.	Diesel Fuel
5. Emergency Water Pump Engine Building 1021 Unit Code 19070	Cummins	NT-855-F3	18104459	11/1982	04/1983	N/A	340 Hp.	Diesel Fuel
6. Emergency Water Pump Engine Building 1021 Unit Code 19071	Cummins	NT-855-F3	18104460	11/1982	04/1983	N/A	340 Hp.	Diesel Fuel
7. Emergency Water Pump Engine Building 1021 Unit Code 19072	Cummins	NT-855-F3	18104458	11/1982	04/1983	N/A	340 Hp.	Diesel Fuel
8. Emergency Water Pump Engine Building 758 Unit Code 19073	Cummins	NT-855-F2	10472285	01/1975	12/1975	N/A	340 Hp.	Diesel Fuel
9. Emergency Water Pump Engine Building 758 Unit Code 19074	Cummins	NT-855-F2	10477671	01/1975	12/1975	N/A	340 Hp.	Diesel Fuel
10. Emergency Water Pump Engine Building 758 Unit Code 19075	Cummins	NT-855-F2	10481182	01/1975	12/1975	N/A	340 Hp.	Diesel Fuel
11. Emergency Water Pump Engine Building 758 Unit Code 19076	Cummins	NT-855-F2	10477283	01/1975	12/1975	N/A	340 Hp.	Diesel Fuel
12. Emergency Generator Building 66701 Unit Code 19129	Engine Cummins Generator Cummins	Engine 6CT8.3-G2 Generator DGFA-5006450	Engine 46166194 Generator 1010313321	Engine 2001 (est.) Generator 2001 (est.)	Engine 2002 Generator 2002	N/A	207 Hp.	Diesel Fuel
13. Emergency Generator Building 1005 Unit Code 19130	Engine Caterpillar Generator Caterpillar	Engine 3412 Generator SR4	Engine BUJ00471 Generator AFR00389	Engine 2003 Generator 2003	Engine 06/2003 Generator 06/2003	N/A	1186 Hp.	Diesel Fuel

1. Basis for Equipment Size or Process Rate (Manufacturers data, Field Observation/Test, etc.) Manufacturer's Data

Submit information for each unit as an attachment _____

**Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)**

TABLE EXEMPTED SOURCES AND EXEMPTED ACTIVITIES

(Generator-Crusher-Screen-Conveyor-Boiler-Mixer-Spray Guns-Saws-Sander-Oven-Dryer-Furnace-Incinerator, etc.) Match the Process Equipment Units listed on this Table to the same numbered line if also listed on Emissions & Stack Table (page 6).

Process Equipment Unit	Manufacturer	Model #	Serial #	Manufacture Date	Installation Date	Modification Date	Size or Process Rate (Hp,kW,Btu:ft ³ :lbs: tons,yd ³ ,etc.)	Fuel Type
1. NA							HR. YR.	
2. NA							HR. YR.	
3. NA							HR. YR.	
4. NA							HR. YR.	
5. NA							HR. YR.	
6. NA							HR. YR.	
7. NA							HR. YR.	
8. NA							HR. YR.	
9. NA							HR. YR.	
10. NA							HR. YR.	
11. NA							HR. YR.	
12. NA							HR. YR.	
13. NA							HR. YR.	

1. Basis for Equipment Size or Process Rate (Manufacturers data, Field Observation/Test, etc.) _____
Submit information for each unit as an attachment

NOTE: Copy this table if additional space is needed (begin numbering with 16., 17., etc.)

**Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)**

UNCONTROLLED EMISSIONS OF INDIVIDUAL AND COMBINED PROCESSES

(Process potential under physical/operational limitations during a 24 hr/day and 365 day/year = 8,760 hrs)

Process Equipment Unit*	Carbon Monoxide (CO)	Oxides of Nitrogen (NOx)	Nonmethane Hydrocarbons NMHC (VOCs)	Oxides of Sulfur (SOx)	Total Suspended Particulate Matter (TSP)	Method(s) used for Determination of Emissions (AP-42, Material balance, field tests, manufacturer data, etc.)
1. Emergency Generator Building 20217 Unit Code 19015	1. 0.681 lbs/hr	3.162 lbs/hr	0.252 lbs/hr	0.209 lbs/hr	0.224 lbs/hr	AP-42 Section 3.2 and Manufacturer Data
	1a. 2.984 tons/yr	13.850 tons/yr	1.103 tons/yr	0.916 tons/yr	0.983 tons/yr	
2. Emergency Generator Building 638 Unit Code 19016	2. 0.341 lbs/hr	1.581 lbs/hr	0.126 lbs/hr	0.105 lbs/hr	0.112 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	2a. 1.492 tons/yr	6.925 tons/yr	0.552 tons/yr	0.458 tons/yr	0.491 tons/yr	
3. Emergency Generator Building 66001 Unit Code 19019	3. 0.681 lbs/hr	3.162 lbs/hr	0.252 lbs/hr	0.209 lbs/hr	0.224 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	3a. 2.984 tons/yr	13.850 tons/yr	1.103 tons/yr	0.916 tons/yr	0.983 tons/yr	
4. Emergency Water Pump Engine Building 1021 Unit Code 19069	4. 2.271 lbs/hr	10.540 lbs/hr	0.840 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	4a. 9.948 tons/yr	46.165 tons/yr	3.678 tons/yr	3.053 tons/yr	3.276 tons/yr	
5. Emergency Water Pump Engine Building 1021 Unit Code 19070	5. 2.271 lbs/hr	10.540 lbs/hr	0.840 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	5a. 9.948 tons/yr	46.165 tons/yr	3.678 tons/yr	3.053 tons/yr	3.276 tons/yr	
6. Emergency Water Pump Engine Building 1021 Unit Code 19071	6. 2.271 lbs/hr	10.540 lbs/hr	0.840 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	6a. 9.948 tons/yr	46.165 tons/yr	3.678 tons/yr	3.053 tons/yr	3.276 tons/yr	
7. Emergency Water Pump Engine Building 1021 Unit Code 19072	7. 2.271 lbs/hr	10.540 lbs/hr	0.840 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	7a. 9.948 tons/yr	46.165 tons/yr	3.678 tons/yr	3.053 tons/yr	3.276 tons/yr	
8. Emergency Water Pump Engine Building 758 Unit Code 19073	8. 2.271 lbs/hr	10.540 lbs/hr	0.840 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	8a. 9.948 tons/yr	46.165 tons/yr	3.678 tons/yr	3.053 tons/yr	3.276 tons/yr	
9. Emergency Water Pump Engine Building 758 Unit Code 19074	9. 2.271 lbs/hr	10.540 lbs/hr	0.840 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	9a. 9.948 tons/yr	46.165 tons/yr	3.678 tons/yr	3.053 tons/yr	3.276 tons/yr	
10. Emergency Water Pump Engine Building 758 Unit Code 19075	10. 2.271 lbs/hr	10.540 lbs/hr	0.840 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	10a. 9.948 tons/yr	46.165 tons/yr	3.678 tons/yr	3.053 tons/yr	3.276 tons/yr	
11. Emergency Water Pump Engine Building 758 Unit Code 19076	11. 2.271 lbs/hr	10.540 lbs/hr	0.840 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	11a. 9.948 tons/yr	46.165 tons/yr	3.678 tons/yr	3.053 tons/yr	3.276 tons/yr	
12. Emergency Generator Building 66701 Unit Code 19129	12. 1.383 lbs/hr	6.417 lbs/hr	0.511 lbs/hr	0.424 lbs/hr	0.455 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	12a. 6.056 tons/yr	28.106 tons/yr	2.239 tons/yr	1.859 tons/yr	1.995 tons/yr	
13. Emergency Generator Building 1005 Unit Code 19130	13. 22.226 lbs/hr	28.464 lbs/hr	2.615 lbs/hr	0.014 lbs/hr	1.044 lbs/hr	AP-42 Section 3.4 and Manufacturer Data
	13a. 97.350 tons/yr	124.672 tons/yr	11.454 tons/yr	0.061 tons/yr	4.573 tons/yr	
Totals of Uncontrolled Emissions	19.797 lbs/hr	126.765 lbs/hr	10.449 lbs/hr	6.514 lbs/hr	8.121 lbs/hr	
	190.128 tons/yr	555.229 tons/yr	45.756 tons/yr	28.535 tons/yr	34.232 tons/yr	

**Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)**

**UNCONTROLLED EMISSIONS OF INDIVIDUAL AND COMBINED
PROCESSES (Continued)**

* If any one (1) of these process units, or combination of units, has an uncontrolled emission greater than ($>$) 10 lbs/hr or 25 tons/yr for any of the above pollutants (based on 8760 hrs of operation), then a permit will be required. Complete this application along with additional checklist information requested on accompanying instruction sheet. Copy this Table if additional space is needed (begin numbering with 11., 12., etc.)

* If all of these process units, individually and in combination, have an uncontrolled emission less than or equal to (\leq) 10 lbs/hr or 25 tons/yr for all of the above pollutants (based on 8760 hrs of operation), but $>$ 1 ton/yr for any of the above pollutants - then a source registration is required.

If your facility does not require a registration or permit, based on above emissions, complete the remainder of this application to determine if a registration or permit would be required for Toxic or Hazardous air pollutants used at your facility.

**Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)**

CONTROLLED EMISSIONS OF INDIVIDUAL AND COMBINED PROCESSES

(Based on current operations with emission controls OR requested operations with emission controls)

Process Equipment Units listed on this Table should match up to the same numbered line and Unit as listed on Uncontrolled Table (pg. 3)

Process Equipment Unit	Carbon Monoxide (CO)	Oxides of Nitrogen (NOx)	Nonmethane Hydrocarbons NMHC (VOCs)	Oxides of Sulfur (SOx)	Total Suspended Particulate Matter (TSP)	Control Method	% Efficiency
1. Emergency Generator Building 20217 Unit Code 19015	1. 0.681 lbs/hr	3.162 lbs/hr	0.252 lbs/hr	0.209 lbs/hr	0.224 lbs/hr	Operating Hours	NA
	1a. 0.068 tons/yr	0.316 tons/yr	0.025 tons/yr	0.021 tons/yr	0.022 tons/yr		
2. Emergency Generator Building 638 Unit Code 19016	2. 0.341 lbs/hr	1.58 lbs/hr	0.126 lbs/hr	0.105 lbs/hr	0.112 lbs/hr	Operating Hours	NA
	2a. 0.034 tons/yr	0.158 tons/yr	0.013 tons/yr	0.011 tons/yr	0.011 tons/yr		
3. Emergency Generator Building 66001 Unit Code 19019	3. 0.681 lbs/hr	3.162 lbs/hr	0.252 lbs/hr	0.209 lbs/hr	0.224 lbs/hr	Operating Hours	NA
	3a. 0.068 tons/yr	0.316 tons/yr	0.025 tons/yr	0.021 tons/yr	0.022 tons/yr		
4. Emergency Water Pump Engine Building 1021 Unit Code 19069	4. 2.271 lbs/hr	10.54 lbs/hr	0.84 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	Operating Hours	NA
	4a. 0.227 tons/yr	1.054 tons/yr	0.084 tons/yr	0.07 tons/yr	0.075 tons/yr		
5. Emergency Water Pump Engine Building 1021 Unit Code 19070	5. 2.271 lbs/hr	10.54 lbs/hr	0.84 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	Operating Hours	NA
	5a. 0.227 tons/yr	1.054 tons/yr	0.084 tons/yr	0.07 tons/yr	0.075 tons/yr		
6. Emergency Water Pump Engine Building 1021 Unit Code 19071	6. 2.271 lbs/hr	10.54 lbs/hr	0.84 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	Operating Hours	NA
	6a. 0.227 tons/yr	1.054 tons/yr	0.084 tons/yr	0.07 tons/yr	0.075 tons/yr		
7. Emergency Water Pump Engine Building 1021 Unit Code 19072	7. 2.271 lbs/hr	10.54 lbs/hr	0.84 lbs/hr	0.697 lbs/hr	0.7489 lbs/hr	Operating Hours	NA
	7a. 0.227 tons/yr	1.054 tons/yr	0.084 tons/yr	0.07 tons/yr	0.075 tons/yr		
8. Emergency Water Pump Engine Building 758 Unit Code 19073	8. 2.271 lbs/hr	10.54 lbs/hr	0.84 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	Operating Hours	NA
	8a. 0.227 tons/yr	1.054 tons/yr	0.084 tons/yr	0.07 tons/yr	0.075 tons/yr		
9. Emergency Water Pump Engine Building 758 Unit Code 19074	9. 2.271 lbs/hr	10.54 lbs/hr	0.84 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	Operating Hours	NA
	9a. 0.227 tons/yr	1.054 tons/yr	0.084 tons/yr	0.07 tons/yr	0.075 tons/yr		
10. Emergency Water Pump Engine Building 758 Unit Code 19075	10. 2.271 lbs/hr	10.54 lbs/hr	0.84 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	Operating Hours	NA
	10a. 0.227 tons/yr	1.054 tons/yr	0.084 tons/yr	0.07 tons/yr	0.075 tons/yr		
11. Emergency Water Pump Engine Building 758 Unit Code 19076	11. 2.271 lbs/hr	10.54 lbs/hr	0.84 lbs/hr	0.697 lbs/hr	0.748 lbs/hr	Operating Hours	NA
	11a. 0.227 tons/yr	1.054 tons/yr	0.084 tons/yr	0.07 tons/yr	0.075 tons/yr		
12. Emergency Generator Building 66701 Unit Code 19129	12. 1.383 lbs/hr	6.417 lbs/hr	0.511 lbs/hr	0.424 lbs/hr	0.455 lbs/hr	Operating Hours	NA
	12a. 0.138 tons/yr	0.642 tons/yr	0.051 tons/yr	0.042 tons/yr	0.046 tons/yr		
13. Emergency Generator Building 1005 Unit Code 19130	13. 22.23 lbs/hr	28.46 lbs/hr	2.615 lbs/hr	0.014 lbs/hr	1.044 lbs/hr	Operating Hours	NA
	13a. 2.223 tons/yr	2.846 tons/yr	0.262 tons/yr	0.001 tons/yr	0.104 tons/yr		
Totals of Controlled Emissions (1 - 13)	43.5 lbs/hr	127 lbs/hr	10.5 lbs/hr	6.54 lbs/hr	8.04 lbs/hr		
	4.35 tons/yr	12.7 tons/yr	1.05 tons/yr	0.66 tons/yr	0.81 tons/yr		

1. Basis for Control Equipment % Efficiency (Manufacturers data, Field Observation/Test, AP-42, etc.) N/A

2. Explain and give estimated amounts of any Fugitive Emissions associated with facility processes N/A

**Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)**

****TOXIC EMISSIONS**

VOLATILE, HAZARDOUS, & VOLATILE HAZARDOUS AIR POLLUTANT EMISSION TABLE

Product Categories (Coatings, Solvents, Thinners, etc.)	Volatile Organic Compound (VOC), Hazardous Air Pollutant (HAP), or Volatile Hazardous Air Pollutant (VHAP) Primary To The Representative As Purchased Product	Chemical Abstract Service Number (CAS) Of VOC, HAP, Or VHAP From Representative As Purchased Product	VOC, HAP, Or VHAP Concentration Of Representative As Purchased Product (pounds/gallon, or %)	I. How were Concentrations Determined (CPDS, MSDS, etc.)	Total Product Purchases For Category		Quantity Of Product Recovered & Disposed For Category		Total Product Usage For Category
					(-)	(=)	(-)	(=)	
I. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
II. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
III. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
IV. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
V. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
VI. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
VII. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
VIII. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
IX. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
X. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
XI. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
XII. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
XIII. NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr
TOTAL >>>>>>> NA					lbs/yr	(-)	lbs/yr	(=)	lbs/yr
					gal/yr		gal/yr		gal/yr

I. Basis for percent (%) determinations (Certified Product Data Sheets, Material Safety Data Sheets, etc.). Submit, as an attachment, information on one (1) product from each Category listed above which best represents the average of all the products purchased in that Category. Copy this Table if additional space is needed (begin numbering with XI., XII., etc.)

****NOTE: A REGISTRATION IS REQUIRED, AT MINIMUM, FOR ANY AMOUNT OF HAP OR VHAP EMISSION. A PERMIT MAY BE REQUIRED FOR THESE EMISSIONS, DETERMINED ON A CASE-BY-CASE EVALUATION.**

**Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)**

MATERIAL AND FUEL STORAGE TABLE

(Tanks, barrels, silos, stockpiles, etc.) Copy this table if additional space is needed (begin numbering with 6., 7., etc.)

Storage Equipment	Product Stored	Capacity (bbls - tons gal - acres, etc)	Above or Below Ground	Construction (welded, riveted) & Color	Install Date	Loading Rate	Offloading Rate	True Vapor Pressure	Control Equipment	Seal Type	% Eff.
1. Tank	Diesel Fuel	130 gallons	Above	Welded/Black	04/1990 (est.)	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
2. Tank	Diesel Fuel	130 gallons	Above	Welded/Black	1986 (est.)	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
3. Tank	Diesel Fuel	125 gallons	Above	Welded/Black	08/1994 (est.)	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
4. Tank	Diesel Fuel	1000 gallons	Above	Welded/Black	04/1983	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
5. Tank	Diesel Fuel	1000 gallons	Above	Welded/Black	04/1983	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
6. Tank	Diesel Fuel	1000 gallons	Above	Welded/Black	04/1983	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
7. Tank	Diesel Fuel	1000 gallons	Above	Welded/Black	04/1983	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
8. Tank	Diesel Fuel	1000 gallons	Above	Welded/Black	12/1975	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
9. Tank	Diesel Fuel	1000 gallons	Above	Welded/Black	12/1975	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
10. Tank	Diesel Fuel	1000 gallons	Above	Welded/Black	12/1975	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
11. Tank	Diesel Fuel	1000 gallons	Above	Welded/Black	12/1975	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
12. Tank	Diesel Fuel	127 gallons	Above	Welded/Black	2002	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A
13. Tank	Diesel Fuel	1400 gallons	Above	Welded/Black	06/2003	N/A HR YR	N/A HR YR	Psia	N/A	N/A	N/A

1. Basis for Loading/Offloading Rate (Manufacturers data, Field Observation/Test, etc.) Submit information for each unit as an attachment

NA

2. Basis for Control Equipment % Efficiency (Manufacturers data, Field Observation/Test, AP-42, etc.) Submit information for each unit as an attachment

NA

**Application for Air Pollutant Sources in Bernalillo County
Source Registration (20.11.40 NMAC) and Construction Permits (20.11.41 NMAC)**

STACK AND EMISSION MEASUREMENT TABLE

If any equipment from the Process Equipment Table (Page 2) is also listed in this Stack Table, use the same numbered line for the Process Equipment unit on both Tables to show the association between the Process Equipment and its Stack. Copy this table if additional space is needed (begin numbering with 6., 7., etc.).

Process Equipment	Pollutant (CO,NOx, TSP,Toluene,etc)	Control Equipment	Control Efficiency	Stack Height & Diameter in feet	Stack Temp.	Stack Velocity & Exit Direction	Emission Measurement Equipment Type	Range-Sensitivity-Accuracy-
1. Emergency Generator Unit Code 19015	CO, NOx, TSP, SOx, NMHC	N/A	N/A	H: 10 ft. D: 0.5 ft.	1045°F	443 ft ³ /min Exit - Horizontal	N/A	N/A
2. Emergency Generator Unit Code 19016	CO, NOx, TSP, SOx, NMHC	N/A	N/A	H: 8 ft. D: 0.5 ft.	1009°F	225 ft ³ /min Exit - Vertical	N/A	N/A
3. Emergency Generator Unit Code 19019	CO, NOx, TSP, SOx, NMHC	N/A	N/A	H: 12 ft. D: 0.5 ft.	1045°F	444 ft ³ /min Exit - Horizontal	N/A	N/A
4. Emergency Water Pump Engine Unit Code 19069	CO, NOx, TSP, SOx, NMHC	N/A	N/A	H: 13 ft D: 0.42 ft	756°F	2378 ft ³ /min Exit - Vertical	N/A	N/A
5. Emergency Water Pump Engine Unit Code 19070	CO, NOx, TSP, SOx, NMHC	N/A	N/A				N/A	N/A
6. Emergency Water Pump Engine Unit Code 19071	CO, NOx, TSP, SOx, NMHC	N/A	N/A				N/A	N/A
7. Emergency Water Pump Engine Unit Code 19072	CO, NOx, TSP, SOx, NMHC	N/A	N/A				N/A	N/A
8. Emergency Water Pump Engine Unit Code 19073	CO, NOx, TSP, SOx, NMHC	N/A	N/A	H: 26.5 ft D: 0.67 ft	756°F	2378 ft ³ /min Exit - Vertical down	N/A	N/A
9. Emergency Water Pump Engine Unit Code 19074	CO, NOx, TSP, SOx, NMHC	N/A	N/A				N/A	N/A
10. Emergency Water Pump Engine Unit Code 19075	CO, NOx, TSP, SOx, NMHC	N/A	N/A				N/A	N/A
11. Emergency Water Pump Engine Unit Code 19076	CO, NOx, TSP, SOx, NMHC	N/A	N/A				N/A	N/A
12. Emergency Generator Unit Code 19129	CO, NOx, TSP, SOx, NMHC	N/A	N/A	H: 11.6 ft D: 0.5 ft.	950°F	898 ft ³ /min Exit - Vertical	N/A	N/A
13. Emergency Generator Unit Code 19130	CO, NOx, TSP, SOx, NMHC	N/A	N/A	H: 11.6 ft D: 0.5 ft.	965°F	6923 ft ³ /min Exit - Vertical	N/A	N/A

1. Basis for Control Equipment % Efficiency (Manufacturers data, Field Observation/Test, AP-42, etc.) Submit information for each unit as an attachment

I, the undersigned, a responsible officer of the applicant company, certify that to the best of my knowledge, the information stated on this application, together with associated drawings, specifications, and other data, give a true and complete representation of the existing, modified existing, or planned new stationary source with respect to air pollution sources and control equipment. I also understand that any significant omissions, errors, or misrepresentations in these data will be cause for revocation of part or all of the resulting registration or permit.

Signed this 25th day of October, 2021

JASON F. VATTIONI, Colonel, USAF

Commander, 377th Air Base Wing

Print Name

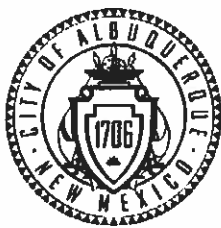
Print Title

VATTIONI.JASON.F.1170028 Digitally signed by VATTIONI.JASON.F.1170028640 Date: 2021.10.25 18:03:04 -08'00'

Signature

Attachment B

**AEHD Permit Application Checklist
Notice of Intent to Construct**



City of Albuquerque

Environmental Health Department

Air Quality Program



Permit Application Checklist

Any person seeking a permit under 20.11.41 NMAC, Authority-to-Construct Permits, shall do so by filing a written application with the Department. Prior to ruling a submitted application complete each application submitted shall contain the required items listed below. **This checklist must be returned with the application.**

Applications that are ruled incomplete because of missing information will delay any determination or the issuance of the permit. The Department reserves the right to request additional relevant information prior to ruling the application complete in accordance with 20.11.41 NMAC.

All applicants shall:

1. Fill out and submit the *Pre-permit Application Meeting Request* form
 - a. Attach a copy to this application

2. Attend the pre-permit application meeting
 - a. Attach a copy of the completed *Pre-permit Application Meeting Checklist* to this application

3. Provide public notice to the appropriate parties
 - a. Attach a copy of the completed *Notice of Intent to Construct* form to this form
 - i. Neighborhood Association(s): See Attached

 - ii. Coalition(s): NA

 - b. Attach a copy of the completed *Public Sign Notice Guideline* form

4. Fill out and submit the *Permit Application*. All applications shall:
 - A. be made on a form provided by the Department. Additional text, tables, calculations or clarifying information may also be attached to the form.

 - B. at the time of application, include documentary proof that all applicable permit application review fees have been paid as required by 20 NMAC 11.02. Please refer to the attached permit application worksheet.

 - C. contain the applicant's name, address, and the names and addresses of all other owners or operators of the emission sources.

- D. contain the name, address, and phone number of a person to contact regarding questions about the facility.
- E. indicate the date the application was completed and submitted
- F. contain the company name, which identifies this particular site.
- G. contain a written description of the facility and/or modification including all operations affecting air emissions.
- H. contain the maximum and standard operating schedules for the source after completion of construction or modification in terms of hours per day, days per week, and weeks per year.
- I. provide sufficient information to describe the quantities and nature of any regulated air contaminant (including any amount of a hazardous air pollutant) that the source will emit during:
 - Normal operation
 - Maximum operation
 - Abnormal emissions from malfunction, start-up and shutdown
- J. include anticipated operational needs to allow for reasonable operational scenarios to avoid delays from needing additional permitting in the future.
- K. contain a map, such as a 7.5-minute USGS topographic quadrangle, showing the exact location of the source; and include physical address of the proposed source.
- L. contain an aerial photograph showing the proposed location of each process equipment unit involved in the proposed construction, modification, relocation, or technical revision of the source except for federal agencies or departments involved in national defense or national security as confirmed and agreed to by the department in writing.
- M. contain the UTM zone and UTM coordinates.
- N. include the four digit Standard Industrialized Code (SIC) and the North American Industrial Classification System (NAICS).
- O. contain the types and **potential emission rate** amounts of any regulated air contaminants the new source or modification will emit. Complete appropriate sections of the application; attachments can be used to supplement the application, but not replace it.
- P. contain the types and **controlled** amounts of any regulated air contaminants the new source or modification will emit. Complete appropriate sections of the application; attachments can be used to supplement the application, but not replace it.

- Q. contain the basis or source for each emission rate (include the manufacturer's specification sheets, AP-42 Section sheets, test data, or other data when used as the source).
- R. contain all calculations used to estimate **potential emission rate** and **controlled emissions**.
- S. contain the basis for the estimated control efficiencies and sufficient engineering data for verification of the control equipment operation, including if necessary, design drawings, test reports, and factors which affect the normal operation (e.g. limits to normal operation).
- T. contain fuel data for each existing and/or proposed piece of fuel burning equipment.
- U. contain the anticipated maximum production capacity of the entire facility and the requested production capacity after construction and/or modification.
- V. contain the stack and exhaust gas parameters for all existing and proposed emission stacks.
- W. provide an ambient impact analysis using a atmospheric dispersion model approved by the US Environmental Protection Agency (EPA), and the Department to demonstrate compliance with the ambient air quality standards for the City of Albuquerque and Bernalillo County (See 20.11.01 NMAC). If you are modifying an existing source, the modeling must include the emissions of the entire source to demonstrate the impact the new or modified source(s) will have on existing plant emissions.
- X. contain a preliminary operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown.
- Y. contain a process flow sheet, including a material balance, of all components of the facility that would be involved in routine operations. Indicate all emission points, including fugitive points.
- Z. contain a full description, including all calculations and the basis for all control efficiencies presented, of the equipment to be used for air pollution control. This shall include a process flow sheet or, if the Department so requires, layout and assembly drawings, design plans, test reports and factors which affect the normal equipment operation, including control and/or process equipment operating limitations.
- AA. contain description of the equipment or methods proposed by the applicant to be used for emission measurement.
- BB. be signed under oath or affirmation by a corporate officer, authorized to bind the company into legal agreements, certifying to the best of his or her knowledge the truth of all information submitted.



Timothy M. Keller,
Mayor

Public Participation

List of Neighborhood Associations and Neighborhood Coalitions MEMORANDUM

To: Andria Cuevas, Program Manager
From: Carina G. Munoz-Dyer, Environmental Health Supervisor
Subject: Determination of Neighborhood Associations and Coalitions
within 0.5 mile of the Kirtland Air Force Base Property in Bernalillo County, NM
Date: October 6, 2021

DETERMINATION:

On October 6, 2021 I used the City of Albuquerque Zoning Advanced Map Viewer (<http://coagisweb.cabq.gov/>) to verify which City of Albuquerque Neighborhood Associations (NA), Homeowner Associations (HOA) and Neighborhood Coalitions (NC) are located within 0.5 mile of the Kirtland Air Force Base Property in Bernalillo County, NM.

I then used the City of Albuquerque Office (COA) of Neighborhood Coordination's Monthly Master NA List dated October 2021 and the Bernalillo County (BC) Monthly Neighborhood Association October 2021 Excel file to determine the contact information for each NA and NC located within 0.5 mile of the Kirtland Air Force Base Property in Bernalillo County, NM.

The table below contains the contact information, which will be used in the City of Albuquerque Environmental Health Department's public notice. Duplicates have been deleted.

COA/BC Association or Coalition	Name	Email or Mailing Address
District 6 Coalition of Neighborhood Associations	Mandy Warr	mandy@theremedadayspa.com ;
	Patricia Willson	info@willsonstudio.com ;
East Gateway Coalition	Michael Brasher	brasher@aps.edu ;
	Julie Dreike	dreikeja@comcast.net ;
	James Andrews	jamesw.andrews01@gmail.com
	Coalition Email	eastgatewaycoalition@gmail.com ;
East Mountain District 5 Coalition	Lisa Davis	ldavis@eastmountaincoalition.org ;
	Paul Butler	info@eastmountaincoalition.org ;
Elder Homestead Neighborhood Association	Marian Jordan	marianjor@aol.com ;
	Sandra Perea	sp-wonderwoman@comcast.net ;
	Association Email	elderhomesteadna@gmail.com ;
Four Hills Village Association	Ellen Lipman	elkaleyah@aol.com ;
	Steve Brugge	spbrugge@gmail.com ;
Juan Tabo Hills Neighborhood Association	Richard Lujan	richtriple777@msn.com ;
	Ryan Giar	ryanqiar@gmail.com ;

La Mesa Community Improvement Association	Idalia Lechuga-Tena	idalialt@gmail.com;
	Dayna Mares	dayna.mares76@gmail.com;
	Association Email	lamesainternationaldistrict@gmail.com;
Parkland Hills Neighborhood Association	Robert Leming	phnapresident@gmail.com;
	Mary Darling	mldarling56@yahoo.com;
Siesta Hills Neighborhood Association	Kathy Pierson	kp-shna@centurylink.net;
	Rachel Baca	rbaca@bizjournals.com;
	Association Email	siesta2na.pres@gmail.com;
South Los Altos Neighborhood Association	Stephen Martos-Ortiz	sdmartos91@gmail.com;
	Debbie Conger	debsla@swcp.com; notices@slananm.org;
	Association Email	contact@slananm.org;
South San Pedro Neighborhood Association	Khadijah Bottom	khadijahasili@vizionz.org;
	Zabdiel Aldaz	zabdiel505@gmail.com;
Southeast Heights Neighborhood Association	John Pate	jpate@molzencorbin.com;
	Pete Belletto	pmbdoc@yahoo.com;
Trumbull Village Association	Alyce Ice	alyceice@gmail.com;
	Joanne Landry	landry54@msn.com;
Victory Hills Neighborhood Association	Melissa Williams	mansdf@comcast.net;
	Patricia Willson <i>Included under District 6 Coalitions of Neighborhood Associations</i>	
Willow Wood Neighborhood Association	Samantha Martinez	samijoster@gmail.com;
	Pamela Meyer	pmeyer@sentrymgt.com;
Yale Village Neighborhood Association	Kim Love	klove726@gmail.com;
	Donald Love	donaldlove08@comcast.net;
	Association Email	yalevillage@comcast.net;

****If email address is not listed, provide public notice via certified mail and include a copy of each mail receipt with the application submittal.***

From: 377 MSG/CE Environmental Air Quality
To: "mandy@theremedyspa.com"; "info@willsonstudio.com"; "brasher@aos.edu"; "dreikeja@comcast.net"; "jamesw.andrews01@gmail.com"; "eastgatewaycoalition@gmail.com"; "ldavis@eastmountaincoalition.org"; "info@eastmountaincoalition.org"; "marianjon@aol.com"; "sp-wonderwoman@comcast.net"; "elderhomesteadna@gmail.com"; "elkalevah@aol.com"; "sbrugoe@gmail.com"; "richtriple777@msn.com"; "ryanglar@gmail.com"; "ldallait@gmail.com"; "dayna.mares26@gmail.com"; "lamesainternationaldistrict@gmail.com"; "phnapresident@gmail.com"; "midarling56@yahoo.com"; "kp-shna@centurylink.net"; "rbaca@bjxjournals.com"; "siesta2na.pres@gmail.com"; "sdmartos91@gmail.com"; "debsla@swcp.com"; "notices@slananm.org"; "contact@slananm.org"; "khadijehasil@vizionz.org"; "zabdiel505@gmail.com"; "pate@molzencorbin.com"; "pmbdoc@yahoo.com"; "alyceice@gmail.com"; "landry54@msn.com"; "mansdf@comcast.net"; "samjoster@gmail.com"; "bmeyer@sentrymot.com"; "klove726@gmail.com"; "donaldlove08@comcast.net"; "yalevillage@comcast.net"
Cc: 377 ABW/PA Administrative Mailbox; CLARK, MELISSA B GS-14 USAF AFGSC 377 MSG/CEIE
Subject: Public Notice of Proposed Air Quality Construction Permit Application (3031-RV2)
Date: Tuesday, October 26, 2021 9:35:00 AM
Attachments: Permit 3031-RV2 Notice of Intent.pdf
Importance: High

Dear Neighborhood Association/Coalition Representative(s).

Why did I receive this public notice?

You are receiving this notice in accordance with New Mexico Administrative Code (NMAC) 20.11.41.13.B(1) which requires any applicant seeking an Air Quality Construction Permit pursuant to 20.11.41 NMAC to provide public notice by certified mail or electronic mail to the designated representative(s) of the recognized neighborhood associations and recognized coalitions that are within one-half mile of the exterior boundaries of the property on which the source is or is proposed to be located.

What is the Air Quality Permit application review process?

The City of Albuquerque, Environmental Health Department, Air Quality Program (Program) is responsible for the review and issuance of Air Quality Permits for any stationary source of air contaminants within Bernalillo County. Once the application is received, the Program reviews each application and rules it either complete or incomplete. Complete applications will then go through a 30-day public comment period. Within 90 days after the Program has ruled the application complete, the Program shall issue the permit, issue the permit subject to conditions, or deny the requested permit or permit modification. The Program shall hold a Public Information Hearing pursuant to 20.11.41.15 NMAC if the Director determines there is significant public interest and a significant air quality issue is involved.

What do I need to know about this proposed application?

Applicant Name	Kirtland Air Force Base
Site or Facility Name	Fire Department Emergency Generators and Water Pumps
Site or Facility Address	2600 San Mateo Blvd SE, Kirtland AFB 87117
New or Existing Source	Existing; Requesting Modification to Permit #3031-RV2
Anticipated Date of Application Submittal	27 October 2021
Summary of Proposed Source to Be Permitted	Kirtland AFB is submitting this application to remove the quinquennial stack testing requirement for Unit 13 (Unit ID No. 19130) contained in permit condition I.6.i). Unit 13 is a 1186 horsepower, diesel, emergency engine located at the Kirtland AFB Fire Department. This unit provides emergency power in the event of local utility power failure, and it is not subject to federal requirements for stack testing under the National Emissions Standard for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ (40 CFR 63.6580) since it meets the requirements of an Existing Institutional Emergency Stationary Reciprocating Internal Combustion Engine. There are no federal requirements to perform stack tests on this unit; therefore, Kirtland AFB is submitting this application to eliminate the quinquennial compliance testing requirement, permit condition I.6.i).

What emission limits and operating schedule are being requested?

See attached Notice of Intent to Construct form for this information.

How do I get additional information regarding this proposed application?

For inquiries regarding the proposed source, contact:

- Kirtland Air Force Base Public Affairs Office
- 377ABW.PA@us.af.mil
- (505) 846-5991

For inquiries regarding the air quality permitting process, contact:

- City of Albuquerque Environmental Health Department Air Quality Program
- aqd@cabq.gov
- (505) 768-1972

NOTICE FROM THE APPLICANT

Notice of Intent to Apply for Air Quality Construction Permit

You are receiving this notice because the New Mexico Air Quality Control Act (20.11.41.13B NMAC) requires any owner/operator proposing to construct or modify a facility subject to air quality regulations to provide public notice by certified mail or electronic mail to designated representatives of recognized neighborhood associations and coalitions within 0.5-mile of the property on which the source is or is proposed to be located.

This notice indicates that the owner/operator intends to apply for an Air Quality Construction Permit from the Albuquerque – Bernalillo County Joint Air Quality Program. Currently, no application for this proposed project has been submitted to the Air Quality Program. Applicants are required to include a copy of this form and documentation of mailed notices with their Air Quality Construction Permit Application.

Proposed Project Information

Applicant's name and address:

Nombre y domicilio del solicitante:

U.S. Air Force - Kirtland Air Force Base 2050 Wyoming Blvd. SE. Suite 116 Albuquerque, NM

Owner / operator's name and address:

Nombre y domicilio del propietario u operador:

Same as above

Contact for comments and inquires:

Datos actuales para comentarios y preguntas:

Name (*Nombre*): Kirtland AFB Public Affairs Office

Address (*Domicilio*): 2000 Wyoming Blvd. SE

Phone Number (*Número Telefónico*): (505)846-5991

E-mail Address (*Correo Electrónico*): 377ABW.PA@us.af.mil

Actual or estimated date the application will be submitted to the department:

Fecha actual o estimada en que se entregará la solicitud al departamento: 1 November 2021

Description of the source:

Descripción de la fuente: Emergency Generators and Fire Water Pumps for KAFB Crash/Fire/Rescue Facilities

Exact location of the source or proposed source:

Ubicación exacta de la fuente o fuente propuesta:

KAFB Crash/Fire/Rescue Facility Building 1005 2600 San Mateo SE, Albuquerque, NM

Nature of business:

Tipo de negocio:

National Security

Process or change for which the permit is requested:

Proceso o cambio para el cuál de solicita el permiso:

Requesting removal of quinquennial stack testing requirement for Unit 13 Emergency Generator. No change in emissions is requested.

Maximum operating schedule:

Horario máximo de operaciones:

24 hrs/day, 7 days/wk, 4 wks/mo, 12 mo/yr up to 200 hr/yr

Normal operating schedule:

Horario normal de operaciones:

Intermittent

Preliminary estimate of the maximum quantities of each regulated air contaminant the source will emit:
Estimación preliminar de las cantidades máximas de cada contaminante de aire regulado que la fuente va a emitir:

Air Contaminant <i>Contaminante de aire</i>	Proposed Construction Permit <i>Permiso de Construcción Propuesto</i>		Net Changes (for permit modification or technical revision) <i>Cambio Neto de Emisiones (para modificación de permiso o revisión técnica)</i>	
	pounds per hour <i>libras por hora</i>	tons per year <i>toneladas por año</i>	pounds per hour <i>libras por hora</i>	tons per year <i>toneladas por año</i>
CO	43.5	4.35	0	0
NOx	127	12.7	0	0
VOC	10.5	1.05	0	0
SO2	6.54	0.66	0	0
PM10	8.04	0.81	0	0
PM2.5	8.04	0.81	0	0
HAP	0	0	0	0

Questions or comments regarding this Notice of Intent should be directed to the Applicant. Contact information is provided with the Proposed Project Information on the first page of this notice. To check the status of an Air Quality Construction Permit application, call 311 and provide the Applicant's information, or visit www.cabq.gov/airquality/air-quality-permits.

The Air Quality Program will issue a Public Notice announcing a 30-day public comment period on the permit application for the proposed project when the application is deemed complete. The Air Quality Program does not process or issue notices on applications that are deemed incomplete. More information about the air quality permitting process is attached to this notice.

Air Quality Construction Permitting Overview

This is the typical process to obtain an Air Quality Construction Permit for Synthetic Minor and Minor sources of air pollution from the Albuquerque – Bernalillo County Joint Air Quality Program.

Step 1: Pre-application Meeting: The Applicant and their consultant must request a meeting with the Air Quality Program to discuss the proposed action. If air dispersion modeling is required, Air Quality Program staff discuss the modeling protocol with the Applicant to ensure that all proposed emissions are considered.

Notice of Intent from the Applicant: Before submitting their application, the Applicant is required to notify all nearby neighborhood associations and interested parties that they intend to apply for an air quality permit or modify an existing permit. The Applicant is also required to post a notice sign at the facility location.

Step 2: Administrative Completeness Review and Preliminary Technical Review: The Air Quality Program has 30 days from the day the permit is received to review the permit application to be sure that it is administratively complete. This means that all application forms must be signed and filled out properly, and that all relevant technical information needed to evaluate any proposed impacts is included. If the application is not complete, the permit reviewer will return the application and request more information from the Applicant. Applicants have three opportunities to submit an administratively complete application with all relevant technical information.

Public Notice from the Department: When the application is deemed complete, the Department will issue a Public Notice announcing a 30-day public comment period on the permit application. This notice is distributed to the same nearby neighborhood associations and interested parties that the Applicant sent notices to, and published on the Air Quality Program's website.

During this 30-day comment period, individuals have the opportunity to submit written comments expressing their concerns or support for the proposed project, and/or to request a Public Information Hearing. If approved by the Environmental Health Department Director, Public Information Hearings are held after the technical analysis is complete and the permit has been drafted.

Step 3: Technical Analysis and Draft Permit: Air Quality Program staff review all elements of the proposed operation related to air quality, and review outputs from advanced air dispersion modeling software that considers existing emission levels in the area surrounding the proposed project, emission levels from the proposed project, and meteorological data. The total calculated level of emissions is compared to state and federal air quality standards and informs the decision on whether to approve or deny the Applicant's permit.

Draft Permit: The permit will establish emission limits, standards, monitoring, recordkeeping, and reporting requirements. The draft permit undergoes an internal peer review process to determine if the emissions were properly evaluated, permit limits are appropriate and enforceable, and the permit is clear, concise, and consistent.

Public Notice from the Department: When the technical analysis is complete and the permit has been drafted, the Department will issue a second Public Notice announcing a 30-day public comment period on the technical analysis and draft permit. This second Public Notice, along with the technical analysis documentation and draft permit, will be published on the Air Quality Program's website, and the public notice for availability of the technical analysis and draft permit will only be directly sent to those who requested further information during the first comment period.

Air Quality Construction Permitting Overview

During this second 30-day comment period, residents have another opportunity to submit written comments expressing their concerns or support for the proposed project, and/or to request a Public Information Hearing.

Possible Public Information Hearing: The Environmental Health Department Director may decide to hold a Public Information Hearing for a permit application if there is significant public interest and a significant air quality issue. If a Public Information Hearing is held, it will occur after the technical analysis is complete and the permit has been drafted.

Step 4: Public Comment Evaluation and Response: The Air Quality Program evaluates all public comments received during the two 30-day public comment periods and Public Information Hearing, if held, and updates the technical analysis and draft permit as appropriate. The Air Quality Program prepares a response document to address the public comments received, and when a final decision is made on the permit application, the comment response document is published on the Air Quality Program's website and distributed to the individuals who participated in the permit process. If no comments are received, a response document is not prepared.

Step 5: Final Decision on the Application: After public comments are addressed and the final technical review is completed, the Environmental Health Department makes a final decision on the application. If the permit application meets all applicable requirements set forth by the New Mexico Air Quality Control Act and the federal Clean Air Act, the permit is approved. If the permit application does not meet all applicable requirements, it is denied.

Notifications of the final decision on the permit application and the availability of the comment response document is published on the Air Quality Program's website and distributed to the individuals who participated in the permit process.

The Department must approve a permit application if the proposed action will meet all applicable requirements and if it demonstrates that it will not result in an exceedance of ambient air quality standards. Permit writers are very careful to ensure that estimated emissions have been appropriately identified or quantified and that the emission data used are acceptable.

The Department must deny a permit application if it is deemed incomplete three times, if the proposed action will not meet applicable requirements, if estimated emissions have not been appropriately identified or quantified, or if the emission data are not acceptable for technical reasons.

For more information about air quality permitting, visit www.cabq.gov/airquality/air-quality-permits

Proposed Air Quality Construction Permit
Permiso de Construcción de Calidad del Aire Propuesta

1. Applicant's Name: **U.S. Air Force - Kirtland Air Force Base**
 Number of Construction Permits: **1**
 Number of Permits to be Issued: **1**

2. Actual or Estimated Date the Applicant will be Subjected to the Permit:
 Permit Action Construction Date: **NOVEMBER 2011**

3. Exact Location of the Source or Proposed Source: **NOVEMBER 2011**
 Location of Source: **NOVEMBER 2011**

4. Description of the Source or Proposed Source: **NOVEMBER 2011**
 Description of Source: **NOVEMBER 2011**

5. Nature of Business: **NATIONAL SECURITY**
 Type of Operation: **NATIONAL SECURITY**
 Process or Change for which a permit is required: **NATIONAL SECURITY**

6. Estimated Annual Air Emissions (lb/year) of each regulated air pollutant:
 Emissions of each pollutant in lb/year of each regulated air pollutant:

Air Pollutant	Proposed Construction Permit	Permit Conditions
CO	48.5	4.50
NOx	15.7	1.57
SOx	0.0	0.0
PM10	0.0	0.0
PM2.5	0.0	0.0
VOC	0.0	0.0

7. Contact Information for Questions and Comments:
KIRTLAND AFB PUBLIC AFFAIRS OFFICE
3000 UNIVERSITY BLVD SE
ALBUQUERQUE, NM 87117
505.336.1000

Proposed Air Quality Construction Permit
Permiso de Construcción de Calidad del Aire Propuesta

1. Applicant's Name: **U.S. Air Force - Kirtland Air Force Base**
 Number of Construction Permits: **1**
 Number of Permits to be Issued: **1**

2. Actual or Estimated Date the Applicant will be Subjected to the Permit:
 Permit Action Construction Date: **NOVEMBER 2011**

3. Exact Location of the Source or Proposed Source: **NOVEMBER 2011**
 Location of Source: **NOVEMBER 2011**

4. Description of the Source or Proposed Source: **NOVEMBER 2011**
 Description of Source: **NOVEMBER 2011**

5. Nature of Business: **NATIONAL SECURITY**
 Type of Operation: **NATIONAL SECURITY**
 Process or Change for which a permit is required: **NATIONAL SECURITY**

6. Estimated Annual Air Emissions (lb/year) of each regulated air pollutant:
 Emissions of each pollutant in lb/year of each regulated air pollutant:

Air Pollutant	Proposed Construction Permit	Permit Conditions
CO	48.5	4.50
NOx	15.7	1.57
SOx	0.0	0.0
PM10	0.0	0.0
PM2.5	0.0	0.0
VOC	0.0	0.0

7. Contact Information for Questions and Comments:
KIRTLAND AFB PUBLIC AFFAIRS OFFICE
3000 UNIVERSITY BLVD SE
ALBUQUERQUE, NM 87117
505.336.1000

Proposed Air Quality Construction Permit
Permiso de Construcción de Calidad del Aire Propuesta

1. Applicant's Name: **U.S. Air Force - Kirtland Air Force Base**
 Number of Construction Permits: **1**
 Number of Permits to be Issued: **1**

2. Actual or Estimated Date the Applicant will be Subjected to the Permit:
 Permit Action Construction Date: **NOVEMBER 2011**

3. Exact Location of the Source or Proposed Source: **NOVEMBER 2011**
 Location of Source: **NOVEMBER 2011**

4. Description of the Source or Proposed Source: **NOVEMBER 2011**
 Description of Source: **NOVEMBER 2011**

5. Nature of Business: **NATIONAL SECURITY**
 Type of Operation: **NATIONAL SECURITY**
 Process or Change for which a permit is required: **NATIONAL SECURITY**

6. Estimated Annual Air Emissions (lb/year) of each regulated air pollutant:
 Emissions of each pollutant in lb/year of each regulated air pollutant:

Air Pollutant	Proposed Construction Permit	Permit Conditions
CO	48.5	4.50
NOx	15.7	1.57
SOx	0.0	0.0
PM10	0.0	0.0
PM2.5	0.0	0.0
VOC	0.0	0.0

7. Contact Information for Questions and Comments:
KIRTLAND AFB PUBLIC AFFAIRS OFFICE
3000 UNIVERSITY BLVD SE
ALBUQUERQUE, NM 87117
505.336.1000



CONSTRUCTION PERMIT
STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF INDUSTRIAL SAFETY
PERMIT NO. 123456789
ISSUED TO: [Name]
ISSUED ON: [Date]

CONSTRUCTION PERMIT
STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF INDUSTRIAL SAFETY
PERMIT NO. 123456789
ISSUED TO: [Name]
ISSUED ON: [Date]

CONSTRUCTION PERMIT
STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF INDUSTRIAL SAFETY
PERMIT NO. 123456789
ISSUED TO: [Name]
ISSUED ON: [Date]

Item	Quantity	Unit	Rate	Total
Excavation	100	cu yd	1.50	150.00
Foundation	50	sq ft	3.00	150.00
Structural Steel	20	tons	7.50	150.00
Concrete	100	cu yd	1.50	150.00
Rebar	100	lb	0.10	10.00
Formwork	100	sq ft	1.00	100.00
Paint	100	gal	1.00	100.00
Other	100	sq ft	1.00	100.00
Total				700.00

Approved by: [Signature]
Date: [Date]



Proposed Air Quality Construction Permit
Permiso de Construcción de Calidad del Aire Propuesto



- Applicant's Name:** U.S. AIR FORCE - KIRTLAND AIR FORCE BASE
 Nombre del solicitante:
Owner or Operator's Name: KIRTLAND AIR FORCE BASE
 Nombre del Proprietario u Operador:
- Actual or Estimated Date the Application will be Submitted to the Department:** 1 NOVEMBER 2021
 Fecha Actual o Estimada en que se Entregará la Solicitud al Departamento:
- Exact Location of the Source or Proposed Source:** KAFB CRASH/FIRE/RESCUE FACILITY, BLDG 1005
 Ubicación Exacta de la Fuente o Fuente Propuesta: 2000 WYOMING BLVD SE, APO, NM 87117
- Description of the Source:** EMERGENCY GENERATORS & FIRE WATER PUMPS FOR
 Descripción del Fuente: KAFB CRASH/FIRE/RESCUE FACILITIES
 Nature of Business: NATIONAL SECURITY
 Tipo de Negocio:
 Process or change for which a permit is requested: REQUEST REMOVAL OF QUINQUENNIAL STACK
 Proceso o cambio para el cual se solicita el permiso: TESTING REQUIREMENT FOR UNIT 13, NO CHANGE IN EMISSIONS REQUESTED

Preliminary estimate of the maximum quantities of each regulated air contaminant the source will emit:
 Estimación preliminar de las cantidades máximas de cada contaminante de aire regulado que la fuente va a emitir:

Air Contaminant Contaminante de Aire	Proposed Construction Permit Permiso de Construcción Propuesta		Net Change Emissions (for permit modification or technical revision) Cambio Neto de Emisiones (para modificación de permiso o revisión técnica)	
	Pounds per hour libras por hora	Tons per year toneladas por año	Pounds per hour libras por hora	Tons per year toneladas por año
CO	48.5	4.38	0	0
NOX	12.7	12.7	0	0
SO2	6.54	0.66	0	0
PM10	8.04	0.81	0	0
PM2.5	8.04	0.81	0	0
HAP				
VOC	18.5	1.85	0	0

- Maximum Operating Schedule:** 24 HRS/DAY, 7 DAYS/WK, 4 WKS/MO, 12 MO/YR UP TO 200 HRS/YR
 Horario Máximo de Operaciones:
Normal Operation Schedule: INTERMITTENT
 Horario Normal de Operaciones:
- Current Contact information for Comments and Inquiries**
 Datos actuales para Comentarios e Inquiries:
 Name (Nombre): KIRTLAND AFB PUBLIC AFFAIRS OFFICE
 Address (Dirección): 2000 WYOMING BLVD SE
 Phone Number (Número telefónico): (505) 246-5491
 Email Address (Correo Electrónico): 371ABW_PA@US.AF.MIL

Call 311 for additional information concerning this project, the Air Quality Program, or to file a complaint.
 Llame al 311 para obtener información adicional sobre este proyecto, del Programa de Calidad del Aire, o para presentar una queja.
 Gọi 311 để biết thêm thông tin hoặc để khiếu nại về dự án này, Chương Trình Chất Lượng Không Khí.

City of Albuquerque, Environmental Health Department, Air Quality Program - Stationary Source Permitting
 Ciudad de Albuquerque, Departamento de Salud Ambiental, Programa de Calidad del Aire - Permisos para Fuentes fijas
 (505) 768-1972, aq@cabq.gov

THIS SIGN SHALL REMAIN POSTED UNTIL THE DEPARTMENT TAKES FINAL ACTION ON THE PERMIT APPLICATION
 ESTE AVISO DEBERÁ DE MANTENERSE PUESTO HASTA QUE EL DEPARTAMENTO TOMA UNA DECISIÓN SOBRE LA SOLICITUD DE PERMISO

Attachment C

Emission Estimation Spreadsheets

Section 4.1 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19015)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	102	=	0.681	x	8,760	+	2,000	=	2.984
	NO _x	0.03100	n/a	x	102	=	3.162	x	8,760	+	2,000	=	13.850
	VOC	0.00247	n/a	x	102	=	0.252	x	8,760	+	2,000	=	1.103
	SO _x	0.00205	n/a	x	102	=	0.209	x	8,760	+	2,000	=	0.916
	*PM	0.00220	n/a	x	102	=	0.224	x	8,760	+	2,000	=	0.983
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.1 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19015)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	102	=	0.681	x	200	+	2,000	=	0.068
	NO _x	0.03100	n/a	x	102	=	3.162	x	200	+	2,000	=	0.316
	VOC	0.00247	n/a	x	102	=	0.252	x	200	+	2,000	=	0.025
	SO _x	0.00205	n/a	x	102	=	0.209	x	200	+	2,000	=	0.021
	*PM	0.00220	n/a	x	102	=	0.224	x	200	+	2,000	=	0.022
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.2 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19016)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	51	=	0.341	x	8,760	+	2,000	=	1.492
	NO _x	0.03100	n/a	x	51	=	1.581	x	8,760	+	2,000	=	6.925
	VOC	0.00247	n/a	x	51	=	0.126	x	8,760	+	2,000	=	0.552
	SO _x	0.00205	n/a	x	51	=	0.105	x	8,760	+	2,000	=	0.458
	*PM	0.00220	n/a	x	51	=	0.112	x	8,760	+	2,000	=	0.491
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.2 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19016)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	51	=	0.341	x	200	+	2,000	=	0.034
	NO _x	0.03100	n/a	x	51	=	1.581	x	200	+	2,000	=	0.158
	VOC	0.00247	n/a	x	51	=	0.126	x	200	+	2,000	=	0.013
	SO _x	0.00205	n/a	x	51	=	0.105	x	200	+	2,000	=	0.011
	*PM	0.00220	n/a	x	51	=	0.112	x	200	+	2,000	=	0.011
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.3 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19019)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	102	=	0.681	x	8,760	+	2,000	=	2.984
	NO _x	0.03100	n/a	x	102	=	3.162	x	8,760	+	2,000	=	13.850
	VOC	0.00247	n/a	x	102	=	0.252	x	8,760	+	2,000	=	1.103
	SO _x	0.00205	n/a	x	102	=	0.209	x	8,760	+	2,000	=	0.916
	*PM	0.00220	n/a	x	102	=	0.224	x	8,760	+	2,000	=	0.983
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.3 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19019)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	102	=	0.681	x	200	+	2,000	=	0.068
	NO _x	0.03100	n/a	x	102	=	3.162	x	200	+	2,000	=	0.316
	VOC	0.00247	n/a	x	102	=	0.252	x	200	+	2,000	=	0.025
	SO _x	0.00205	n/a	x	102	=	0.209	x	200	+	2,000	=	0.021
	*PM	0.00220	n/a	x	102	=	0.224	x	200	+	2,000	=	0.022
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.4 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19069)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	8,760	+	2,000	=	9.948
	NO _x	0.03100	n/a	x	340	=	10.540	x	8,760	+	2,000	=	46.165
	VOC	0.00247	n/a	x	340	=	0.840	x	8,760	+	2,000	=	3.678
	SO _x	0.00205	n/a	x	340	=	0.697	x	8,760	+	2,000	=	3.053
	*PM	0.00220	n/a	x	340	=	0.748	x	8,760	+	2,000	=	3.276
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.4 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19069)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	200	+	2,000	=	0.227
	NO _x	0.03100	n/a	x	340	=	10.540	x	200	+	2,000	=	1.054
	VOC	0.00247	n/a	x	340	=	0.840	x	200	+	2,000	=	0.084
	SO _x	0.00205	n/a	x	340	=	0.697	x	200	+	2,000	=	0.070
	*PM	0.00220	n/a	x	340	=	0.748	x	200	+	2,000	=	0.075
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.5 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19070)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	8,760	+	2,000	=	9.948
	NO _x	0.03100	n/a	x	340	=	10.540	x	8,760	+	2,000	=	46.165
	VOC	0.00247	n/a	x	340	=	0.840	x	8,760	+	2,000	=	3.678
	SO _x	0.00205	n/a	x	340	=	0.697	x	8,760	+	2,000	=	3.053
	*PM	0.00220	n/a	x	340	=	0.748	x	8,760	+	2,000	=	3.276
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.5 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19070)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	200	+	2,000	=	0.227
	NO _x	0.03100	n/a	x	340	=	10.540	x	200	+	2,000	=	1.054
	VOC	0.00247	n/a	x	340	=	0.840	x	200	+	2,000	=	0.084
	SO _x	0.00205	n/a	x	340	=	0.697	x	200	+	2,000	=	0.070
	*PM	0.00220	n/a	x	340	=	0.748	x	200	+	2,000	=	0.075
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.6 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19071)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	8,760	+	2,000	=	9.948
	NO _x	0.03100	n/a	x	340	=	10.540	x	8,760	+	2,000	=	46.165
	VOC	0.00247	n/a	x	340	=	0.840	x	8,760	+	2,000	=	3.678
	SO _x	0.00205	n/a	x	340	=	0.697	x	8,760	+	2,000	=	3.053
	*PM	0.00220	n/a	x	340	=	0.748	x	8,760	+	2,000	=	3.276
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.6 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19071)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	200	+	2,000	=	0.227
	NO _x	0.03100	n/a	x	340	=	10.540	x	200	+	2,000	=	1.054
	VOC	0.00247	n/a	x	340	=	0.840	x	200	+	2,000	=	0.084
	SO _x	0.00205	n/a	x	340	=	0.697	x	200	+	2,000	=	0.070
	*PM	0.00220	n/a	x	340	=	0.748	x	200	+	2,000	=	0.075
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.7 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19072)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	8,760	+	2,000	=	9.948
	NO _x	0.03100	n/a	x	340	=	10.540	x	8,760	+	2,000	=	46.165
	VOC	0.00247	n/a	x	340	=	0.840	x	8,760	+	2,000	=	3.678
	SO _x	0.00205	n/a	x	340	=	0.697	x	8,760	+	2,000	=	3.053
	*PM	0.00220	n/a	x	340	=	0.748	x	8,760	+	2,000	=	3.276
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.7 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19072)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	200	+	2,000	=	0.227
	NO _x	0.03100	n/a	x	340	=	10.540	x	200	+	2,000	=	1.054
	VOC	0.00247	n/a	x	340	=	0.840	x	200	+	2,000	=	0.084
	SO _x	0.00205	n/a	x	340	=	0.697	x	200	+	2,000	=	0.070
	*PM	0.00220	n/a	x	340	=	0.748	x	200	+	2,000	=	0.075
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.8 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19073)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	8,760	+	2,000	=	9.948
	NO _x	0.03100	n/a	x	340	=	10.540	x	8,760	+	2,000	=	46.165
	VOC	0.00247	n/a	x	340	=	0.840	x	8,760	+	2,000	=	3.678
	SO _x	0.00205	n/a	x	340	=	0.697	x	8,760	+	2,000	=	3.053
	*PM	0.00220	n/a	x	340	=	0.748	x	8,760	+	2,000	=	3.276
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.8 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19073)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	200	+	2,000	=	0.227
	NO _x	0.03100	n/a	x	340	=	10.540	x	200	+	2,000	=	1.054
	VOC	0.00247	n/a	x	340	=	0.840	x	200	+	2,000	=	0.084
	SO _x	0.00205	n/a	x	340	=	0.697	x	200	+	2,000	=	0.070
	*PM	0.00220	n/a	x	340	=	0.748	x	200	+	2,000	=	0.075
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
 ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
 *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.9 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19074)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	8,760	+	2,000	=	9.948
	NO _x	0.03100	n/a	x	340	=	10.540	x	8,760	+	2,000	=	46.165
	VOC	0.00247	n/a	x	340	=	0.840	x	8,760	+	2,000	=	3.678
	SO _x	0.00205	n/a	x	340	=	0.697	x	8,760	+	2,000	=	3.053
	*PM	0.00220	n/a	x	340	=	0.748	x	8,760	+	2,000	=	3.276
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.9 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19074)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	200	+	2,000	=	0.227
	NO _x	0.03100	n/a	x	340	=	10.540	x	200	+	2,000	=	1.054
	VOC	0.00247	n/a	x	340	=	0.840	x	200	+	2,000	=	0.084
	SO _x	0.00205	n/a	x	340	=	0.697	x	200	+	2,000	=	0.070
	*PM	0.00220	n/a	x	340	=	0.748	x	200	+	2,000	=	0.075
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.10 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19075)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	8,760	+	2,000	=	9.948
	NO _x	0.03100	n/a	x	340	=	10.540	x	8,760	+	2,000	=	46.165
	VOC	0.00247	n/a	x	340	=	0.840	x	8,760	+	2,000	=	3.678
	SO _x	0.00205	n/a	x	340	=	0.697	x	8,760	+	2,000	=	3.053
	*PM	0.00220	n/a	x	340	=	0.748	x	8,760	+	2,000	=	3.276
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.10 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19075)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year. Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	200	+	2,000	=	0.227
	NO _x	0.03100	n/a	x	340	=	10.540	x	200	+	2,000	=	1.054
	VOC	0.00247	n/a	x	340	=	0.840	x	200	+	2,000	=	0.084
	SO _x	0.00205	n/a	x	340	=	0.697	x	200	+	2,000	=	0.070
	*PM	0.00220	n/a	x	340	=	0.748	x	200	+	2,000	=	0.075
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

- * Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.
- ** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).
- *** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.11 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19076)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors [EPA or Manufacturers] that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	8,760	+	2,000	=	9.948
	NO _x	0.03100	n/a	x	340	=	10.540	x	8,760	+	2,000	=	46.165
	VOC	0.00247	n/a	x	340	=	0.840	x	8,760	+	2,000	=	3.678
	SO _x	0.00205	n/a	x	340	=	0.697	x	8,760	+	2,000	=	3.053
	*PM	0.00220	n/a	x	340	=	0.748	x	8,760	+	2,000	=	3.276
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.

** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).

*** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.11 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19076)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year.

Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	340	=	2.271	x	200	+	2,000	=	0.227
	NO _x	0.03100	n/a	x	340	=	10.540	x	200	+	2,000	=	1.054
	VOC	0.00247	n/a	x	340	=	0.840	x	200	+	2,000	=	0.084
	SO _x	0.00205	n/a	x	340	=	0.697	x	200	+	2,000	=	0.070
	*PM	0.00220	n/a	x	340	=	0.748	x	200	+	2,000	=	0.075
Diesel > 600 Hp	CO	0.0055											
	NO _x	0.024											
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.

** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).

*** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.12 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19129)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	207	=	1.383	x	8,760	+	2,000	=	6.056
	NO _x	0.03100	n/a	x	207	=	6.417	x	8,760	+	2,000	=	28.106
	VOC	0.00247	n/a	x	207	=	0.511	x	8,760	+	2,000	=	2.239
	SO _x	0.00205	n/a	x	207	=	0.424	x	8,760	+	2,000	=	1.859
	*PM	0.00220	n/a	x	207	=	0.455	x	8,760	+	2,000	=	1.995
Diesel > 600 Hp	CO	0.0055						x	8,760	+	2,000	=	
	NO _x	0.024						x	8,760	+	2,000	=	
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.

** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).

*** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.12 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19129)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year.

Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668	n/a	x	207	=	1.383	x	200	+	2,000	=	0.138
	NO _x	0.03100	n/a	x	207	=	6.417	x	200	+	2,000	=	0.642
	VOC	0.00247	n/a	x	207	=	0.511	x	200	+	2,000	=	0.051
	SO _x	0.00205	n/a	x	207	=	0.424	x	200	+	2,000	=	0.042
	*PM	0.00220	n/a	x	207	=	0.455	x	200	+	2,000	=	0.046
Diesel > 600 Hp	CO	0.0055						x		+	2,000	=	
	NO _x	0.024						x		+	2,000	=	
	**VOC	0.000705											
	***SO _x	0.00001214											
	*PM	0.0007											

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.

** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).

*** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 4.13 Potential Emission Rates (PER) or Uncontrolled Emissions (Unit ID 19130)

To calculate emissions in the table below, use the EPA Emission Factors (Given) OR Manufacturers Emission Factors in (lbs/Hp-hr) if available. Note: Choose the factors (EPA or Manufacturers) that will generate the highest Lbs/Hr and Tons/Year emission rate for EACH air contaminant.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Potential Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x	8,760	+	2,000	=	
	NO _x	0.011		x		=		x	8,760	+	2,000	=	
	VOC	0.015		x		=		x	8,760	+	2,000	=	
	SO _x	0.000591		x		=		x	8,760	+	2,000	=	
	*PM	0.000721		x		=		x	8,760	+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668		x		=		x	8,760	+	2,000	=	
	NO _x	0.03100		x		=		x	8,760	+	2,000	=	
	VOC	0.00247		x		=		x	8,760	+	2,000	=	
	SO _x	0.00205		x		=		x	8,760	+	2,000	=	
	*PM	0.00220		x		=		x	8,760	+	2,000	=	
Diesel > 600 Hp	CO	0.0055	0.01874	x	1186	=	22.226	x	8,760	+	2,000	=	97.350
	NO _x	0.024	0.01521	x	1186	=	28.464	x	8,760	+	2,000	=	124.672
	**VOC	0.000705	0.002205	x	1186	=	2.615	x	8,760	+	2,000	=	11.454
	***SO _x	0.00001214	n/a	x	1186	=	0.014	x	8,760	+	2,000	=	0.061
	*PM	0.0007	0.00088	x	1186	=	1.044	x	8,760	+	2,000	=	4.573

* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.

** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).

*** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Section 5.13 Controlled Emission Rates (Requested Permitted Allowable Rates) (Unit ID 19130)

If using the same emission factors as above to calculate the Controlled Emission Rates, start the table below by transferring the Emissions in Lbs/Hour from the column above and then complete the remainder of the equation starting with the Requested Operating Hours/Year.

Note: You may choose different factors for calculating Controlled Emission Rates, however the Engine must meet the Lbs/Hour rate given for each regulated air contaminant if performance testing is requested.

Engine Fuel Type	Pollutants	EPA Emission Factors (Lbs/ Hp-hour)	Manufacturers Emission Factors (Lbs/ Hp-hour)	T I M E S	Size of Engine In Horsepower	E Q U A L S	Emissions in Lbs / Hour	T I M E S	Requested Operating Hours / Year	D I V I D E	Pounds Per Ton	E Q U A L S	Emission In Tons / Year
Gasoline	CO	0.439		x		=		x		+	2,000	=	
	NO _x	0.011		x		=		x		+	2,000	=	
	VOC	0.015		x		=		x		+	2,000	=	
	SO _x	0.000591		x		=		x		+	2,000	=	
	*PM	0.000721		x		=		x		+	2,000	=	
Diesel ≤ 600 Hp	CO	0.00668		x		=		x		+	2,000	=	
	NO _x	0.03100		x		=		x		+	2,000	=	
	VOC	0.00247		x		=		x		+	2,000	=	
	SO _x	0.00205		x		=		x		+	2,000	=	
	*PM	0.00220		x		=		x		+	2,000	=	
Diesel > 600 Hp	CO	0.0055	0.01874	x	1186	=	22.226	x	200	+	2,000	=	2.223
	NO _x	0.024	0.01521	x	1186	=	28.464	x	200	+	2,000	=	2.846
	**VOC	0.000705	0.002205	x	1186	=	2.615	x	200	+	2,000	=	0.262
	***SO _x	0.00001214	n/a	x	1186	=	0.014	x	200	+	2,000	=	0.001
	*PM	0.0007	0.00088	x	1186	=	1.044	x	200	+	2,000	=	0.104

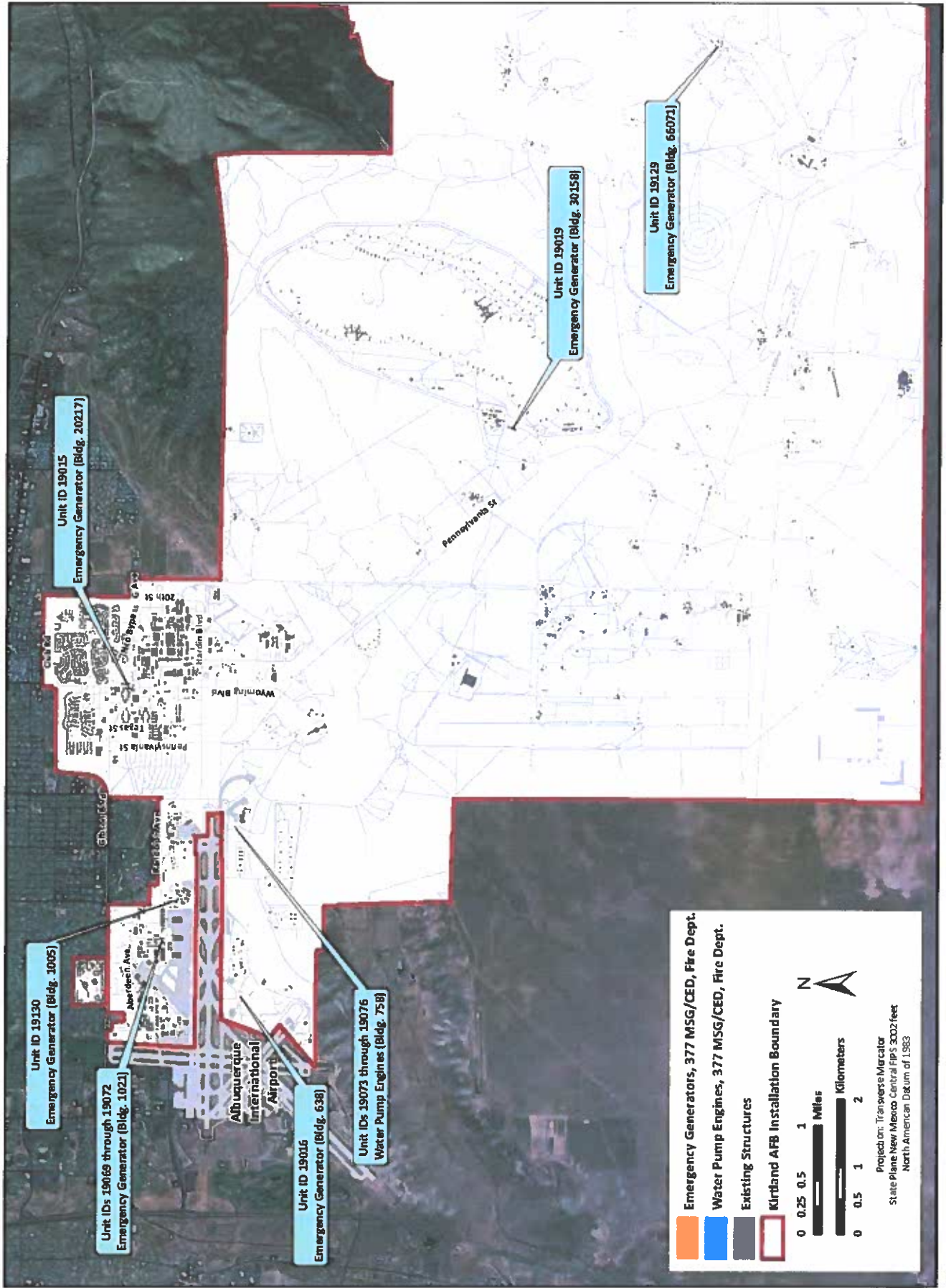
* Particulate matter (PM) emissions also reflect PM₁₀ and PM_{2.5} emissions.

** The EPA Volatile Organic Compounds (VOC) emission factor is the AP-42 emission factor for Total Organic Compounds (TOC).

*** The EPA Sulfur Oxides (SO_x) emission factor is calculated as 0.00809 x 0.0015 wt. % sulfur in diesel fuel = 0.00001214.

Attachment D

Location Map



Unit ID 19015
Emergency Generator (Bldg. 20217)

Unit ID 19019
Emergency Generator (Bldg. 30158)

Unit ID 19129
Emergency Generator (Bldg. 66071)

Unit ID 19130
Emergency Generator (Bldg. 1005)

Unit IDs 19069 through 19072
Emergency Generator (Bldg. 1021)

Unit ID 19016
Emergency Generator (Bldg. 638)

Unit IDs 19073 through 19076
Water Pump Engines (Bldg. 758)

Emergency Generators, 377 MSG/CED, Fire Dept.

Water Pump Engines, 377 MSG/CED, Fire Dept.

Existing Structures

Kirtland AFB Installation Boundary

0 0.25 0.5 1 Miles

0 0.5 1 2 Kilometers

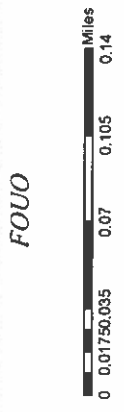
North Arrow

Projected: Transverse Mercator
State Plane New Mexico Central FIPS 3002 feet
North American Datum of 1983



Kirtland AFB

Air Emission Sources



- Legend**
-  Air Emission Points
 -  Buildings
 -  Kirtland AFB Boundary





Kirtland AFB Air Emission Sources



FOUO



- Legend**
-  Air Emission Points
 -  Kirtland AFB Boundary
 -  Buildings



Funding provided by: DE - Air Force Civil Engineering Center for Air Quality Research, 10000 10th St, Suite 1000, Fort Worth, TX 76116-5000.



Imaging provided by U.S. Air Force Civil Engineering Center Environmental Directorate (AEGP) for U.S. Air Force Civil Engineering Center (CEC) Kirtland AFB, NM. Prepared by: CAI/Environmental Services/SAAS.

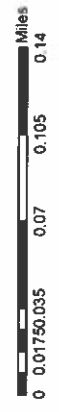


Kirtland AFB

Air Emission Sources

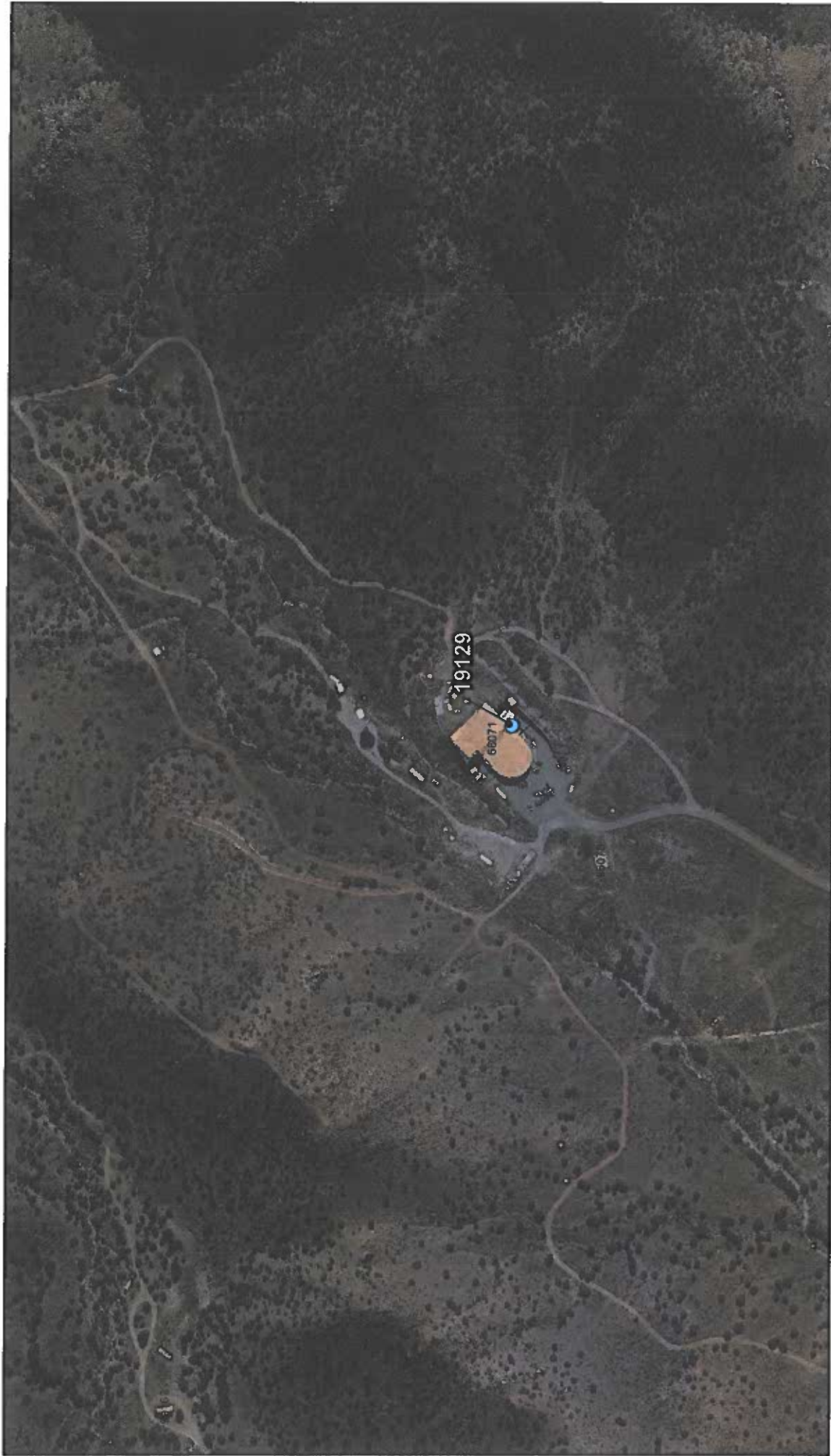


FOUO



- Legend**
-  Air Emission Points
 -  Buildings
 -  Kirtland AFB Boundary





Funding provided by U.S. Air Force Civil Engineering Center Environmental Directorate through the U.S. Army Corps of Engineers' Vicksburg District's Support for Airmen's Health (U.S. Army Corps of Engineers' Vicksburg District's Support for Airmen's Health - 2018-2021)






Kirtland AFB

Air Emission Sources



FOUO



- Legend**
-  Air Emission Points
 -  Buildings
 -  Kirtland AFB Boundary



Attachment E

Process Flow Diagram

Process Flow Diagram for a Generator

