



Timothy M. Keller, Mayor

Environmental Health Department
Air Quality Program
Interoffice Memorandum



Paul J. Rogers, Director

Title V – USAF Kirtland Air Force Base (KAFB) - Statement of Basis

Company: United States Air Force (USAF) – KAFB
Facility: USAF-KAFB (Facility)
TV Permit #: 0527-RN2
AIRS#: NM/001/00026
Permit Writer: Barbara Georgitsis
Permit Action: Title V Operating Permit Renewal

Table with 2 columns and 7 rows detailing permit review milestones. Headers include 'DRAFT Permit Review', 'Permitting (initial & date): AL 6/7/24', 'Compliance/Enforcement (initial & date): VV, 5/30/24', 'Legal Review (if applicable - initial & date): N/A', 'Date to Permittee/Facility for review: 5/7/24', 'Date of Permittee/Facility response: 7/12/24, 9/12/24 and 10/4/24', 'Public Notice (30-day comment) & Gov't Entities: November 7, 2024-December 7, 2024', 'Any Comments from Public Notice:', 'Date Proposed Permit to EPA:', 'Any Comments from EPA:', and 'Date Final permit to Permit Manager or Asst Director for signature:'.

1.0 Introduction

This document summarizes the legal and factual basis for the draft permit conditions in the United States Air Force – Kirtland Air Force Base (Permittee) air operating permit to be issued under the authority of the Albuquerque Environmental Health Department (Department) and the Albuquerque/Bernalillo County Air Quality Control Board (A/BCAQCB); pursuant to the Federal Clean Air Act (CAA, also known herein as the Federal Act); the New Mexico Air Quality Control Act, NMSA 1978, as amended 74-2-4, 74-2-5.C; the Joint Air Quality control Board Ordinance, Revised Ordinances of Albuquerque 1994, 9-5-1-4; the Joint air quality Control Board Ordinance, Bernalillo County Ordinance 94-5; A/BCAQCB Regulation Title 20, New Mexico Administrative Code (NMAC), Chapter 11 (20.11 NMAC), Part 41 (20.11.41 NMAC), Construction Permits; Part 42 (20.11.42 NMAC), Operating Permits. Unlike the permit, this document is not legally enforceable. This document includes references to the applicable statutory or regulatory provisions that relate to the Permittee’s emissions to the atmosphere. In addition, this Statement of Basis provides a description of the Permittee’s activities at the Facility. The application

was received on January 22, 2022 and deemed administratively complete on October 29, 2022 with supplemental information received on July 28, 2022 and August 31, 2022.

The Permittee has grouped air emission sources based on the guidance provided in the U.S. Environmental Protection Agency (EPA) Memorandum, Major Source Determinations for Military Installations under the Air Toxics, New Source Review, and Title V Operating Permit Programs of the Clean Air Act (CAA), August 2, 1996 and as approved by the AEHD AQD. Activities at Kirtland AFB (Facility) that are under common control and are related to the primary activity of the installation are included in the Title V operating permit. Support activities that are related to the primary activity of the installation are classified under Standard Industrial Classification (SIC) code 49 (Utilities), SIC code 92 (Fire Protection/Police) and SIC code 45 (Transportation by Air).

Other activities at the base that were determined to be under separate control are not included in the Title V operating permit. Personnel related activities are not considered to be support facilities to the primary military activities of the Permittee. Any air emission sources that are not under the common control and are not related to the primary activity of the Permittee will be addressed under separate permitting actions. Entities considered to be under separate control are owned or operated by the following organizations: New Mexico Air National Guard, Defense Threat Reduction Agency, Federal Aviation Administration, and the United States Army.

The Permittee hosts several types of activities for the convenience of military personnel, their dependents, and Department of Defense (DOD) civilian employees working on the base. These activities do not support the primary activity of Kirtland AFB and are not included in this permit. These activities include: Army and Air Force Exchange Service (AAFES) Gasoline Stations, 377 Force Support Squadron (Auto Hobby Shop, Arts & Crafts Center, Aero Club, Golf Course), and Commissary. Although these sources are not included in the Title V operating permit, the sources may be subject to new source review permitting requirements.

One of the Permittee’s tenants is the U.S. Department of Energy (DOE) and its primary facility, Sandia National Laboratories (SNL). Some of DOE’s functions are on land or in buildings leased from Kirtland AFB, while others are on land owned by DOE. The Title V operating permit will not include DOE; DOE/SNL operates under separate permitting actions that will include operations under DOE’s Kirtland Area Office and Albuquerque Area Office. Additionally, the Lovelace Respiratory Institute is a tenant of DOE at Kirtland AFB and is not included in the Title V operating permit.

2.0 Facility Description

The Permittee is located in Bernalillo County, New Mexico adjacent to the City of Albuquerque. This Facility is an Air Force Base. The 377 ABW is the host unit at the Facility. The mission of the 377 ABW is to provide world-class nuclear surety, expeditionary forces, and support to base operations. The primary activity at the Facility is classified under SIC code 97, National Security. As the host unit, the 377 ABW supports numerous tenants and maintains a number of utilities, maintenance shops and facility support services.

3.0 History of Permitting Actions

Table 1.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
0484	February 5, 1996	NSR	Initial NSR for source for aircraft engine test cells

0484-M1	July 23, 2003	NSR	Modification request for an increase in the annual testing hours and to provide emissions based on JP-8 fuel instead of JP-4 fuel which was the fuel specified for ATC #484. The requested operating hours are from 10 hours/day, 6 days/wk, 52 wk/yr, and 12 months/yr. The requested maximum engine test hours are the following: T700 – 235 hrs/yr, T64 – 460 hrs/yr, T400 – 300 hrs/yr. KAFB has also requested that no more than two (2) engines will be tested at one time.
0484-M2	February 9, 2009	NSR	Modification request for the addition of a test stand for testing T56 aircraft engines
0484-M2-RV1	November 13, 2009	NSR	Revision request to update particulate, SOx emissions and HAP emissions
0484-M2-RV2	March 22, 2011	NSR	Revision request to remove pound per hour criteria pollutant emission limits for individual engines and fix typo in naphthalene emissions.
0484-M2-RV3	May 11, 2011	NSR	Revision request to add a total pound per hour emission limit for each criteria pollutant.
0484-M3	October 29, 2014	NSR	Modification request to replace the T64 and T56 test cells with one T400 test cell and the ability to test all four cells at the same time
0527	December 16, 2011	Title V	Issuance of initial Title V operating permit
1759	April 19, 2005	NSR	Initial NSR for source for one (1) 1334 hp natural gas fired emergency generator engine
1759-M1	June 30, 2010	NSR	Revision request to update the permitted emission rates and UTM coordinates, and to add four (4) 752 hp diesel fired emergency generator engines
1759-M1-RV1	May 27, 2015	NSR	Revision request to reduce the frequency of compliance testing for Unit #1 to once every five (5) years, while subjecting the unit to the requirements of 40 CFR 63 Subpart ZZZZ
1759-M2	January 12, 2023	NSR	Removal of quinquennial testing requirements
1770	May 1, 2007	NSR	Initial NSR for source for Corrosion Control Facility
1770-RV1	July 28, 2008	NSR	Revision request for a correction to the Air Pollution Control Equipment Table of Permit #1770 only included eight stacks and not ten as identified in the air quality permit application
1770-RV2	December 14, 2012	NSR	Revision request to allow for the interchangeable use of the spray guns in the inventory and flexibility with regards to control equipment as long as the control efficiency is maintained
1770-RV3	February 27, 2013	NSR	Revision request to remove specific information describing the spray guns from the Process Equipment table, and fix typos in the annual permitted limits for HAPs and VOCs
1777	January 29, 2007	NSR	Initial NSR for source for four (4) 900 hp diesel fired emergency generator engine
1777-RV1	July 22, 2015	NSR	Revision request to replace the four (4) 900 hp diesel fired emergency generator engines with four (4) 755 hp engines subject to 40 CFR 60 Subpart IIII
1777-RV2	April 7, 2016	NSR	Revision request to authorize the facility to operate under either one of two operating scenarios, using the four (4) 900 hp diesel fired emergency generator engines until the four (4) 755 hp engines subject to 40 CFR 60 Subpart IIII are installed
1786	November 15, 2005	NSR	Initial NSR for source for four (4) diesel fired emergency generator engine 535 hp, 755 hp, 380 hp and 277 hp
1786-RV1	March 16, 2006	NSR	Revision request to fix typo in SOx emissions
1786-M1	June 15, 2012	NSR	Modification request to remove and add equipment to the Process

			Equipment table, to consolidate Permits #1698, #1702, #1714 and Registration Certificate #1701, and to update permitted emissions values to account for AP-42
1786-M2	April 30, 2014	NSR	Modification request to increase permitted emissions limits to account for correct hp ratings and compliance testing results
1786-M3	February 10, 2016	NSR	Modification request to shutdown a well shaft engine and replace a small natural gas-fired engine with a larger diesel-fired engine
1786-M4	March 21, 2017	NSR	Modification request to shutdown a well shaft engine and replace a small natural gas-fired engine with a larger diesel-fired engine
1786-M5	January 13, 2019	NSR	Addition of two 176 hp emergency engines
1945	February 5, 2009	NSR	Initial NSR for source for one (1) 99hp diesel fired emergency generator engine
2085	June 9, 2010	NSR	Initial NSR for source for one (1) 94.5 hp diesel fired emergency generator engine
2100	October 8, 2010	NSR	Initial NSR for source for one (1) 348 hp diesel fired emergency generator engine
2105	November 8, 2010	NSR	Initial NSR for source for one (1) 762 hp diesel fired emergency generator engine
2105-R1	November 22, 2010	NSR	Revision request for engine to be referred to as a process (non-emergency) generator engine
2105-RV1	April 18, 2011	NSR	Typo in permit number corrected, SOx emissions and compliance testing requirements updated .
2105-M1	January 9, 2023	NSR	Modified 2105-RV1 to place hourly limits to 200 hrs/yr from 2500 hrs/yr so the RICE is now considered an emergency generator engine.
2147	April 8, 2011	NSR	Initial NSR for source for one (1) 399 hp diesel fired emergency generator engine
3013	June 27, 2012	NSR	Initial NSR for source for one (1) 250 hp diesel-fired emergency generator engine
3013-RV1	August 3, 2012	NSR	Revision request for changes regarding terminology inaccuracies
3016	July 2, 2012	NSR	Initial NSR for source for one (1) 750 hp diesel-fired emergency generator engine and two (2) diesel-fired fire pump engines
3016-RV1	August 3, 2012	NSR	Revision request for changes regarding terminology inaccuracies
3016-RV2	October 7, 2014	NSR	Revision request for updating equipment model numbers
3031	December 21, 2012	NSR	Initial NSR for source for five (5) diesel-fired emergency generator engines and eight (8) diesel-fired water pump engines
3047	November 29, 2012	SIP	Initial SIP for source for two (2) natural-gas fired boilers
3047	September 6, 2023	REG	Boilers removed and replaced with <1 MMBtu/hr boilers for comfort heat, which were added to the Insignificant Activity list; REG cancelled.
3048	January 9, 2013	NSR	Initial NSR for source for one (1) landfill mulcher powered by one (1) 425 hp diesel-fired engine
3048-RV1	May 27, 2014	NSR	Revision request to remove potential operating location
3048-2TR	March 6, 2017	NSR	Revision request to limit operating hours and location of the mulcher
3070	April 2, 2013	SIP	Initial SIP for site-wide chemical usage
3070-M1	October 25, 2013	NSR	Modification request to incorporate total miscellaneous paint and chemical usage activities
3070-M1-1TR	February 27, 2017	NSR	Revision request to incorporate total miscellaneous paint and chemical usage activities, including both common and non-common controlled activities
3032-M1-	February 27, 2017	NSR	Revision request consolidating Source Registrations #1954, 1771

1AR			and 1773 and changing the mix of RICE
3032-M1-2AR	March 4, 2022	NSR	Removed Emergency engine, 19150, since it is owned by the National Guard and not the Permittee
3101	December 9, 2013	NSR	Initial NSR for source for munitions squadron
3101-RV1	July 28, 2014	NSR	Revision request for changes regarding terminology inaccuracies
3101-RV1-1AR (3101-2AR)	August 26, 2024, October 2024	NSR	Revision for removal of emergency engine 19014. Permit number was changed due to new numbering system.
3102	August 20, 2013	SIP	Initial SIP for Airfield Operations, Bldg 334
3128	April 30, 2014	NSR	Initial NSR for source for Training Development Paint Booth
3129	June 10, 2014	NSR	Initial NSR for source for one (1) 355 hp diesel fired emergency generator engine
3141	March 21, 2014	NSR	Initial NSR for source for one (1) 1490 hp diesel fired emergency generator engine
3141-RV1	May 27, 2014	NSR	Revision request for changes regarding terminology inaccuracies
3308	May 31, 2017	NSR	Initial NSR for source for one (1) 74.3 hp diesel fired emergency generator engine
3323	November 21, 2017	NSR	Initial NSR for source for one (1) 49 hp diesel fired emergency generator engine
3329	September 25, 2017	NSR	Initial NSR for soil vapor extraction remediation system
0527-RN1	January 22, 2018	Title V	Title V operating permit renewal
3331	May 16, 2018; May 20, 2023	NSR	Initial NSR for soil vapor extraction remediation system; Permit cancelled, because it was never installed
3366,1944, 3331, 3323	May 20, 2023	NSR	Permits were cancelled since equipment was removed or decommissioned. Dept received Request to Cancel forms. For 3323, the unit was never installed. An 88 hp unleaded gasoline engine permitted under 1944, was not a listed unit in the Title V permit, 0527-RN1, and therefore, did not need to be removed.
3470	December 28, 2022	NSR	Installation of IIII, Tier 3, diesel fired emergency engine, installed 4/2023, unit 19186.
3492	May 30, 2023	NSR	Installation of IIII, Tier 3, diesel fired emergency engine, installed 7/23, unit 19188.
3501	October 11, 2023	NSR	Installation of IIII, Tier 3, diesel fired emergency engine, installed 12/23, unit 19190.
3047	April 7, 2024	REG	Registration was cancelled by Permittee since the boilers were removed and replaced with insignificant boilers for comfort heat.
0527-RN2	2025	Title V	Title V operating permit renewal--PENDING

4.0 Summary of Updates from the Previous Title V Permit (0527-RN1)

Table 2.

Device/Other	Description
Emergency Generator/Engines-19183 (3366); 19014 (3101-2AR)	Removed from Facility so devices were removed from Permit Process Table and other parts of the Permit. Other devices are permitted in these permits; therefore, they are still active.
Emergency Generator/Engine-19180 (3323)	Removed from the permit since the device was never installed.
Emergency Generator/Engines-19181 & 19182 (1786-M5)	Added the units to the permit.

Soil Vapor Extractor 12010 (3331)	Removed from Process Table - Never installed
Boilers 14166 & 14167 (3047)	Removed from the Facility and replaced with boilers <1 MMBtu/hr for comfort heat which were added to the Insignificant Activity list.
TSP Emission Limits	Removed TSP emission limits because TSP is regulated as PM ₁₀
7.0 Emergencies Section, 7.2 Emergency Provisions constitutes an “affirmative defense” ... pursuant to 20.11.42.12.E.(2)(a)-(d) NMAC was removed. As well as, emergency language in any section of the permit.	Removed/deleted language from section pursuant to Federal Register, Vol. 8, No. 139, July 21, 2023, 47029. The rule 20.11.42.12 NMAC was revised in October 2024 to reflect this change.
Added to any reference to Excess Emission regulation in 20.11.49 NMAC, and the “Excess Emission” form was updated.	This regulation is not SIP approved and is “Locally Enforceable Only”.
Emergency Generator/Engine 19094 (3032-M1-2AR)	Removed from permit. Engine was issued AQN 3439-AQN01 to NM National Guard. It is no longer owned by the Permittee.
19130 (Diesel) and 19135 (NG) RICE (1759-M2)	Removed quinquennial testing requirements for the emergency RICE since testing is not required for emergency engines unless the Department requests testing.
19135 (1759-M2)	This engine is a SI ICE at an institution and is subject to 40 CFR 63, Subpart ZZZZ to operate as an emergency engine pursuant to 63.6640(f). Permit 1759-M2 was incorrect in stating that the engine was not subject to Subpart ZZZZ. Therefore, the unit 19135 was included with the other ZZZZ emergency engines.
Removed Condition 4.3 of TV permit 0537-RN1	The Permittee does not own or operate continuous emission monitoring systems (CEMS) or other continuous parameter monitoring systems (CPMS)
Removed engine 19150 (3032-M1-2AR)	Removed from permit, no longer owned by the Permittee
Unit 19159 (2105-M1) is now an emergency engine.	200 hrs/yr limitation placed on the unit. Previously was a non-emergency engine at 2500 hrs/yr.
Unit 22005 (3090-RV1), Gasoline Storage Tank	In 2018, 10,000 gallon tank replaced with 5000 gal tank (replacement allowed under the permit), throughput and emission rates remain the same.
Added units 19186, 19188, 19190 which were permitted (see Table 1. above)	Included with other emergency engines with 40 CFR 60, Subpart III requirements.
For unit 19186, permit 3470, SO ₂ was incorrectly calculated for the permit. The ULSD is the fuel used and the 0.0015% Sulfur content was not considered in the calculation for permit 3470, and the result was a much larger SO ₂ emission rate of 6.11 lbs/hr. No document is referred to where the emission factor was derived; therefore, AP-42 was used.	Recalculated, and the SO ₂ was the same emissions as the other 755 hp (large ICE) emergency engines at the Facility. ULSD fuel with 0.0015% sulfur content and AP-42 emission factor from AP-42 Chapter 3, Table 3.4-1 were used – 0.00809 lb/hp-hr*0.0015% *755 hp = 0.009 lb/hr. Therefore, the emission rate was decreased. Also, the emission rate is consistent with other 755 hp Subpart III engines at the Facility.
Removed language in the monitoring section (under previous Title V permit, section 3.4.4) because it does not apply.	Monitoring of applicable units is on-going and was in effect upon issuance of the NSR construction permit or registration as well as the first Title V operating permit issued and subsequent renewals.
Added to unit 18001 (mulcher engine) description for CO catalyst	Permittee provided information for CO catalyst installed in 2014. Added to process description table in permit along with engine 18001, Table 5b.
Changed the Reporting dates in	Upon request of the Permittee and Department approval, the compliance

Table 10. Reporting Requirements	reporting dates were changed. The Permittee must account for transition period after the permit is issued to account for the date change from the previous reporting dates.
Added, updated various serial numbers, model numbers, dates for emission units where previously had "TBD"	Updated process table for various units that were recently permitted or did not have the correct information. Now Process tables are Table 5a-5g, and Emission/Operation requirements tables are Table 6a-6g.

5.0 Insignificant Activities

The Department's, Operating Permit Program List of Insignificant Activities was proposed to EPA on December 15, 1993 and was revised on August 18, 1995 and on January 3, 1996 with EPA approval. Pursuant to 20.11.42 NMAC, Operating Permits, the Department may list certain activities located at major source as insignificant based on the activities' actual limitations, emission rates, or production rates and approved by the US EPA. The PTE was previously considered for the Title V applicability determination; however, the "Insignificant Activities" do not need to be included in the annual emission's inventory nor fees. Table 4 of the Permit lists the insignificant activities at the Facility.

6.0 State Regulatory Analysis:

Table 3.

20.11 NMAC Title	Comments	Applies (Y/N)
20.11.1 NMAC General Provisions	Any department or federally enforceable permit term or condition which limits the quantity, rate, or concentration of air emissions of air pollutants on a continuous basis determined at the time of issuance or renewal of a permit to be an applicable requirement	Y
20.11.2 NMAC Fees	Since this facility requires an operating permit, it is subject to this regulation. The Permittee pays all filing and permit fees as required.	Y
20.11.3 NMAC Transportation Conformity	Federally funded transportation projects	N
20.11.4 NMAC General Conformity	The Permittee will perform conformity assessments when necessary and is in compliance with this regulation.	Y
20.11.5 NMAC Visible Air Contaminants	The Permittee shall cause or allow visible emissions that exceed an opacity of 20 percent, 6 minute time-averaged. For spark ignition engines, these units shall not cause or allow visible air emissions to exceed 5 percent opacity for any three (3) minute timed average, except for the initial 10 seconds after startup pursuant to 20.11.5.13.B NMAC. For diesel engines, these units shall not cause or allow visible air emissions to exceed 20 percent opacity for any six (6) minute timed average pursuant to 20.11.5.13.C NMAC.	Y
20.11.6 NMAC Emergency Action Plan	The Permittee will comply with the provisions of this part as necessary.	Y
20.11.7 NMAC Variance Procedure	The Permittee will comply with the provisions of this part if they need to obtain a variance from requirements prescribed by the Board.	Y

20.11.8 NMAC Ambient Air Quality Standards	This regulation adopts the Federal and State ambient air quality standards (NAAQS and NMAAQs).	Y
20.11.20 NMAC Fugitive Dust Control	The Permittee takes adequate steps to minimize the release of PM into the air and obtains the proper permits required under this part.	Y
20.11.21 NMAC Open Burning	The Permittee applies for a permit for each explosive ordnance disposal/testing event it performs and also obtains multiple burn permits for its fire training activities.	Y
20.11.22 NMAC Woodburning	The Permittee fireplaces and woodstoves are not operated during designated “no-burn” periods.	Y
20.11.23 Stratospheric Ozone Protection	The Permittee’s repair and disposal operations for refrigeration units are in compliance with the provisions of this regulation. Equipment used to service motor vehicle AC system must meet SAE Standard J-1990, Repair and Disposal of Refrigeration Units.	Y
20.11.40 NMAC Source Registration	This regulation addresses registration of applicable stationary air pollution sources. The Permittee has sources registered under this regulation.	Y
20.11.41 NMAC Construction Permits	This regulation addresses pre-construction permitting of applicable stationary air pollution sources. The Permittee has sources permitted under this regulation.	Y
20.11.42 NMAC Operating Permits	This regulation addresses permitting of Title V sources. The Permittee is a Title V major source of NOx and CO with PTE >100 tpy.	Y
20.11.43 NMAC Stack Height Requirements	This regulation pertains to stack heights as used to evaluate air quality impacts. The stack heights for emission source at the Facility are credible under the term “good engineering practices.”	Y
20.11.46 NMAC Sulfur Dioxide Emissions Inventory Requirements; Western Backstop Sulfur Dioxide Trading Program	All stationary sources with actual emission of one hundred (100) tons per year or more of sulfur dioxide in the year 2000, or in any subsequent year, shall submit an annual inventory of sulfur dioxide emissions.	N
20.11.47 NMAC Emissions Inventory (EI) Requirements	Applies to the owner or operator of every stationary source in Bernalillo County that has an active permit issued pursuant to 20.11.41 NMAC, Authority to Construct, or 20.11.42 NMAC, Operating Permits. EI is due to the Department annually by March 15.	Y

20.11.49 NMAC Excess Emissions	This rule pertains to any source whose operation results in an emission of a regulated air pollutant, including fugitive emissions, in excess of the quality, rate, opacity or concentration specified by an air quality regulation or permit condition. This rule is “Only Locally Enforceable”.	Y
20.11.60 NMAC Permitting in nonattainment areas	The Facility is located in a maintenance area for CO, so this part is currently not applicable and is currently in attainment for all other regulated pollutants.	N
20.11.61 NMAC Prevention of Significant Deterioration	This regulation pertains to Prevention of Significant Deterioration and is not applicable to the Permittee. The Facility is not nor is it equipped with any named PSD Source Categories. The PTE is less than 250 tpy of any regulated pollutant. The Facility has never had a PTE of greater than 250 tpy therefore a contemporaneous period has not been triggered and netting calculations are not required.	N
20.11.62 NMAC Acid Rain	Applies to acid rain pollutants for power and cogeneration facilities	N
20.11.63 NMAC New Source Performance Standards	This regulation pertains to new source performance standards (NSPS) and incorporates the Federal NSPS as applicable.	Y
20.11.64 NMAC Emission Standard For Hazardous Air Pollutants For Stationary Sources	This regulation pertains to national emission standards for Hazardous Air Pollutants (NESHAP) and incorporates the federal NESHAP and maximum achievable control technology standards (MACT) as applicable.	Y
20.11.65 NMAC Volatile Organic Compounds	The Permittee owns and operates fuel dispensing facilities and covers sources not otherwise covered under 40 CFR 60—Gasoline storage tanks >40,000 gallon capacity; gasoline loading rack w/30-day throughput >600,000 gallons; transport and delivery of gasoline; delivery of gasoline into underground storage tanks; gasoline handling and holding at retail and fleet service stations; industrial handling storage, or use of organic, fluids and gases; cutback asphalt; or contaminated soils and/or groundwater treatment. Remediation- Soil Vapor Extraction System (SVES)	Y
20.11.66 NMAC Process Equipment	Process Equipment, cement kilns, gypsum cookers, and asphaltic batch plants.	N
20.11.67 NMAC Equipment, Emissions, Limitations	Orchard Heaters, Kraft Mills, Coal Burning Equipment, Oil Burning Equipment, Gas Burning Equipment greater than 1,000,000 million BTUs per year	N

20.11.68 NMAC Incinerators and Crematories	Incinerators and crematories	N
20.11.69 NMAC Pathological Waste Destructors	Pathological Waste Destructors	N
20.11.71 NMAC Municipal Solid Waste Landfills	Municipal Solid Waste Landfill means an entire disposal facility in a contiguous geographical space where household waste is placed or on land. Applies to existing, active, closed and new landfills pursuant to the applicable Federal NSPS and NESHAP. See Landfills section 9.E. below.	N
20.11.90 NMAC Admin.,Enfor, Inspection	To minimize emissions from sources through inspection, enforcement, and good operating procedures.	Y

7.0 Federal Regulatory Analysis

Table 4.

Citation	Comments	Applies (Y/N)
40 CFR 60, Subpart A - General Provisions	Pollutants applicable to 40 CFR 60, General provisions for any new or revised NSPS. Applicable for each emission unit affected by a NSPS, as indicated in 40 CFR 60 (see below)	Y
40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	Storage vessels for volatile organic liquids with a storage capacity greater than 40,000 cubic meters constructed or modified after July 23, 1984. Regulated Pollutant: VOC	N
40 CFR 60, Subparts Cc, Cf, WWW, XXX - NSPS for Landfills	Applicable to MSW Landfills with various applicability dates and criteria. See section 8.0.E, "Landfills" below for details.	N
40 CFR 60 Subpart IIII – Standards of Performance (NSPS) for Compression Ignition Internal Combustion Engines (RICE)	Applicable to all non-emergency and emergency stationary compression ignition internal combustion engines ordered, modified or reconstructed after July 11, 2005 and manufactured after April 1, 2006.	Y
40 CFR 60 Subpart JJJJ – NSPS for Stationary Spark Ignition ICE	Applicable to all non-emergency and emergency stationary spark ignition internal combustion engines that commence construction, modification or reconstruction after June 12, 2006.	N
40 CFR 61 Subpart A General Provisions	General provisions for National Emission Standards for Hazardous	Y

	Air Pollutants (NESHAP). Regulated Pollutants: HAPs	
40 CFR 61 Subpart M National Emission Standards for Asbestos	Asbestos mills, roadways with asbestos tailings, manufacturing operations using commercial asbestos, demolition and renovation activities, spraying of asbestos-containing materials, fabricating operations using commercial asbestos, and operations that convert asbestos-containing material into asbestos free material. Regulated Pollutants: Asbestos	Y
40 CFR 63, Subpart A General Provisions	General provisions for stationary sources that emit or have the potential to emit HAPs.	Y
40 CFR 63, Subpart AAAA NESHAP for Landfills	Major HAP sources	N
40 CFR 63, Subpart ZZZZ NESHAP for Stationary RICE.	Applicable to stationary reciprocating internal combustion engines at a major or area source of HAP emissions.	Y
40 CFR 63 Subpart BBBBBB – NESHAP for Gasoline Distribution Bulk Terminals, Bulk Plants and Pipeline Facilities The provisions of this subpart are applicable to owners and operators of bulk gasoline plants.	Applicable to existing bulk terminals at the Facility.	Y
40 CFR 63 Subpart CCCCC –NESHAP for Source Category: Gasoline Dispensing Facilities	Applicable to existing gasoline dispensing facilities.	Y
40 CFR 80 Subpart I Motor Vehicle Diesel Fuel; Nonroad, Locomotive, and Marine Diesel Fuel; And ECA Marine Fuel	Applicable to all non-emergency and emergency stationary compression ignition internal combustion engines ordered, modified or reconstructed after July 11, 2005 and manufactured after April 1, 2006.	Y
40 CFR 82 – Stratospheric Ozone	Applicable to controlled substances used by the Permittee.	Y
40 CFR 98 – Mandatory Greenhouse Gas Reporting Rule	The Permittee is a Facility that in any calendar year starting in 2010 which meets the conditions listed under § 98.2(3) of 40 CFR 98. Annual reporting is due to EPA by March 31.	Y

8.0 Facility Devices/Processes

Refer to Tables 5a-5g in permit.

A. Aircraft Engine Testing

Aircraft engine testing is conducted for various reasons at Kirtland AFB. Engine runs are often required to isolate

mechanical problems reported by pilots after their flights. Trim tests, analogous to an automobile tune-up, are required periodically to ensure that aircraft are operating according to specifications. Additionally, functional tests of aircraft components often require engine runs. After engine or system maintenance has been performed, engine tests are required to ensure that aircraft are flightworthy.

Engine testing is often conducted with the aircraft on the flightline or at an outdoor testing position, commonly known as a trim pad, in which case, engine emissions are released directly to the ambient air. Engine testing on the flightline conducted with the engine remaining installed in the aircraft are considered mobile sources and are not addressed in this permit. Some testing, however, is conducted in enclosed “hush houses” specifically designed to accommodate such tests and to suppress the noise associated with testing. These facilities are operated by the New Mexico Air National Guard (NMANG) and so are not part of the Title V operating permit. Testing is also conducted in “test cells”, where uninstalled engines are tested on test stands.

General Description

The Facility currently has test cells operated by the 58th Special Operations Wing (58 SOW) located at Building 702. Kirtland AFB has received a modified authority to Construction Permit for the test cells. The aircraft engine test cell facility received an Air Quality Construction Permit (#0484-M3) which was issued on October 29, 2014 pursuant to 20.11.41 NMAC.

The test cells at the 58 SOW are used to test uninstalled Pratt and Whitney T400 helicopter engines and GE T700 helicopter engines on test stands. The test cells consist of a test bay, an augments system, an exhaust plenum, a primary and a secondary air intake silencer, and an exhaust silencer. The test cells are designed to accommodate “off-aircraft” engines only.

B. Internal Combustion sources

The internal combustion units are used to power generators and water well pumps at the Facility. These engines vary in power output and burn diesel (ULSD) or natural gas. The emergency engines have operating hour limits of 200 hours/yr; however, the engine for the mulcher (18001) is limited to 500 hours/yr. The diesel units shall not cause or allow visible air emissions to exceed 20 percent opacity for any six (6) minute timed average pursuant to 20.11.5.12 NMAC.

C. External Combustion sources

The three permitted boilers (<10 MMBtu/hr each) shall not cause or allow visible air emissions to exceed 20 percent opacity for any six (6) minute timed average pursuant to 20.11.5.12 NMAC. The Units may operate 8,760 hours per year and shall combust only pipeline quality NG.

D. Chemical and Paint usage

Chemical and paint usage involves spot stripping, touch-up and surface coating repair operations for large aircraft and smaller removable aircraft components to improve their durability and/or appearance. Spray application of coatings involves high volume low pressure [HVLP] spray guns. HVLP spray guns are designed to reduce the amount of paint required to coat a surface by reducing the amount of overspray (i.e., coating material that misses or bounces off the surface).

Coating operations are generally conducted in a paint booth, but such activities can be unenclosed. Paint booths provide a better environment for painting by isolating the activity from wind, dust, and other external effects. Booths are equipped with filters for PM control and heating, ventilation, and air conditioning (HVAC) equipment for temperature and humidity controls. Emissions from surface coating include the VOC and HAP in the solvents that are part of the coatings (and the solvents used for thinning and for cleanup) and PM emissions from overspray.

The Permittee currently has a corrosion control facility operated by the 58 SOW located west of Doris Street between Aberdeen and Randolph Avenue. The Facility conducts surface coating operations for mission support activities within its paint booths. Mission support activities involve spot stripping, touch-up and surface coating repair of aircraft. Currently, the facility has an Air Quality Authority-To-Construct permit (#1770-RV3) which was issued on February 27, 2013 pursuant to 20.11.41 NMAC.

The Facility also has a training development paint booth operated by the 58 SOW located at Building 482 on Aberdeen. Currently, the facility has a Construction permit (#3128) which was issued on February 27, 2013 pursuant to 20.11.41 NMAC.

E. Landfills

LF-08 and LF-268 were constructed before 17 July 2014 and have accepted waste after 8 November 1987; therefore, they meet the definition of an “existing, closed or active MSW landfill” pursuant to 20.11.71.7 and are subject to 20.11.71.12(A). In accordance with 20.11.71.14(A), LF-08 and LF-268 must comply with all requirements of 40 CFR 60 Subpart Cc. The design capacity of LF-08 and LF-268 are less than the federal thresholds, therefore they are not subject to 40 CFR 60 Subparts Cc, Cf, WWW and 40 CFR 63 Subpart AAAA. However, based on the amount of waste or waste capacity, and the year LF-08 and LF-268 were constructed, they are not subject to 40 CFR 60 Subparts Cc, Cf, WWW, and XXX, and 40 CFR 63 Subpart AAAA.

LF-08 is closed and holds approximately 1.8 million cubic meters of municipal waste. Although it did not have a design capacity, the waste volume is less than the threshold of 2.5 million megagrams or 2.5 million cubic meters. Therefore, it is not subject to 40 CFR 60 Subpart Cc.

LF-268 is a C&D landfill. Records indicate that LF-268 cannot hold more than 1.4 million cubic meters of waste. Although LF-268 did not have a design capacity, the volume capacity is less than the threshold of 2.5 million megagrams or 2.5 million cubic meters. Therefore, LF-268 is not subject to 40 CFR 60 Subpart Cc.

LF-08 does not require a Title V Permit because the amount of waste is less than the design capacity of 2.5 million megagrams or 2.5 million cubic meters. Therefore, LF-08 is not subject to 40 CFR 60 Subpart Cf. LF-268 does not require a Title V Permit because the volume capacity is less than the design capacity of 2.5 million megagrams or 2.5 million cubic meters. Therefore, LF-268 is not subject to 40 CFR 60 Subpart Cf.

40 CFR 60, Subpart WWW, LF-08 and LF-268 were both constructed before 30 May 1991; therefore, this subpart does not apply.

40 CFR 60, Subpart XXX, This subpart does not apply to LF-08 and LF-268 because they were not constructed after 17 July 2014.

40 CFR 63, Subpart AAAA, LF-08 and LF-268 accepted waste after 1987. However, Kirtland AFB is not a major source of HAPS pursuant to §63.1935(a)(1) and (2) and the definition of §63.2, and both LF-08 and LF-268 do not have a design capacity greater than 2.5 million megagrams or 2.5 million cubic meters. Therefore, LF-08 and LF-268 are not subject to this subpart.

F. Soil Vapor Extraction System (SVES) ST-070E– Remediation for contaminated soil at 3550 Aberdeen Dr. SE

9.0 Operational Requirements/Emission Limitations

Operational Requirements are listed in the permit Tables 6a-6g. The Permittee provided emission data along with applicable references for the emission factors used to derive the emissions at the Facility. The Department reviewed and verified the emissions. The emissions are listed in the Tables in the Permit. The emissions and associated data are in the following spreadsheet used for the analysis of this Permit (details are also in section 3.3 Emission Limits, Table 7 in permit):



Difference in emissions from previous Title V renewal one permit (RN1) and current renewal permit (RN2):

Permit	NOx		CO		SO2		PM ₁₀ /PM _{2.5}		VOC		HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
RN1	572.70	91.70	242.10	41.75	31.86	4.31	38.60	6.00	518.10	110.00		3.20
RN2	561.282	65.202	242.279	32.525	26.004	3.240	36.389	4.826	528.891	108.151		3.340
Difference	-11.42	-26.50	0.18	-9.23	-5.86	-1.07	-2.21	-1.17	10.79	-1.85		0.14

10.0 PSD Applicability:

Prevention of Significant Deterioration (PSD) - Major stationary sources in attainment areas listed with potential emissions greater than or equal to 250 tpy or specifically listed sources with potential emissions greater than or equal to 100 tpy of any regulated pollutant. The Facility is not equipped with any named PSD Source Categories listed in Table 1 of 20.11.61 NMAC – PSD Source Categories. In addition, the Facility is located in an attainment area and is below 250 tons per year for each of the regulated pollutants.

11.0 Compliance Testing:

Unit No.	Compliance Test	Test Dates
#19135 (#1759-M2)	NOx, CO and Opacity (Quinquennial)	The last quinquennial test was conducted on April 10, 2018; testing for 2023 was waived by the Department. At the Permittee’s request and Department approval, the requirements for future testing of the emergency engine have been waived.
#19130 (CP #3031-RV2)	NOx, CO and Opacity (Quinquennial)	The last quinquennial test was conducted on November 21, 2017; testing was waived by the Department for 2022 at the request of the Permittee (letter from Permittee dated 9/9/2022). At the Permittee’s request and Department approval, the requirements for future testing of the emergency engine have been waived.
Facility Wide	As applicable, anytime	Upon request by Department

12.0 Compliance and Enforcement Status:

The Permittee has certified compliance with all applicable requirements.

13.0 Modeling:

An Air Quality Dispersion Model was performed by the Permittee and reviewed by the Department. A report is summarized in an Interoffice Memo dated October 13, 2022. Following are modeled emission rates for PM₁₀, PM_{2.5}, NO_x, CO and SO₂ and the modeling results:

Particulate Emission Rates for sources

Source ID	Source Description	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)
20002A	Test Cell engine (jet fuel)	0.627	0.627
20002B	Test Cell engine (jet fuel)	0.627	0.627
20004A	Test Cell engine (jet fuel)	0.083	0.083
20004B	Test Cell engine (jet fuel)	0.083	0.083
21015EF6	Paint booth	0.516	0.516
21015EF7	Paint booth	0.516	0.516
21015EF8	Paint booth	0.516	0.516
21015EF9	Paint booth	0.516	0.516
21015EF10	Paint booth	0.516	0.516
21015EF11	Paint booth	0.516	0.516
21015EF12	Paint booth	0.516	0.516
21015EF13	Paint booth	0.516	0.516
21015EF14	Paint booth	0.516	0.516
21015EF15	Paint booth	0.516	0.516
18001	Landfill mulcher engine (diesel)	0.94	0.94
12010	Soil Vapor Extraction System (propane)	0.00	0.00
21004	58 SOW Paint Booth	1.28	1.28
19183*	AFOTEC Generator (diesel)	0.19	0.19
Totals		8.99	8.99

*Engine was removed from the Facility; NSR permit, 3366, was canceled May 2023.

Combustion Gas Emission Rates

Source ID	Source Description	NO _x (lb/hr)	CO (lb/hr)	SO ₂ (lb/hr)
20002A	Test Cell engine (jet fuel)	3.758	3.93	0.31
20002B	Test Cell engine (jet fuel)	3.758	3.93	0.31
20004A	Test Cell engine (jet fuel)	1.334	2.157	0.216
20004B	Test Cell engine (jet fuel)	1.334	2.157	0.216
18001	Landfill mulcher engine (diesel)	13.12	2.84	0.87
12010	Soil Vapor Extraction System (propane)	0.17	0.076	0.0
19183*	AFOTEC Generator (diesel)	0.152	0.58	0.021
Totals		23.626	15.67	1.943

*Engine was removed from the Facility; NSR permit, 3366, was canceled May 2023.

Impact of emissions vs. Ambient Air Quality Standards

Pollutant	Averaging Time	Modeled Impact (µg/m ³)	Background (µg/m ³)	Model + Background (µg/m ³)	Most stringent Standard (µg/m ³)	Pass/Fail
NO ₂	1-hour	n/a	n/a	185.1	188	P
NO ₂	Annual	0.8	Modeled impacts insignificant		94	P
CO	1-hour	55.6	Modeled impacts insignificant		15007	P
CO	8-hour	23.7			9967	P
SO ₂	1-hour	5.2	Modeled impacts insignificant		196.4	P

PM ₁₀	24-hour	18	42	60	150	P
PM _{2.5}	24-hour	8.5	22	30.5	35	P
PM _{2.5}	Annual	2.5	8.4	10.9	12	P

The Department accepted the dispersion modeling submitted by the Permittee, and compliance with the NMAAQs and NAAQS was demonstrated.

14.0 Total Pollutant Emission from Entire Facility

Pollutant	Emissions (tpy)
Nitrogen Oxides (NO _x)	65.38
Carbon Monoxide (CO)	32.53
Particulate Matter (PM ₁₀)	4.83
Particulate Matter (PM _{2.5})	4.83
Volatile Organic Compounds (VOC)	108.24
Sulfur Dioxide (SO ₂)	3.00
Hazardous Air Pollutants (HAPs)	3.34

*For information only, not an enforceable condition

15.0 Title V Affected Programs' Notification:

Affected Program	Distance	Units	Date Letter Sent
Municipality – Santo Domingo Pueblo	37	miles	
Municipality – Zia Pueblo	34	miles	
Municipality – Santa Ana Pueblo	26	miles	
Municipality - San Felipe Pueblo	28	miles	
Municipality – Navajo Nation	50	miles	
Municipality – Laguna Pueblo	47	miles	
Municipality – Jemez Pueblo	45	miles	
Municipality - Isleta Pueblo	15	miles	
Municipality – Acoma Pueblo	50	miles	
Municipality – Cochiti Pueblo	45	miles	
Municipality – Sandia Pueblo	13	miles	
State - New Mexico	50	miles	

16.0 Public and EPA Comment Period - Response/Concerns

Public comment period was from November 7, 2024 to December 7, 2024. The public notice was published on the CABQ.gov website and the Albuquerque Journal; e-mails and certified letters to Tribal entities were sent to affected programs and interested parties.

The EPA 45-day comment period was from /2024 to /2024. The EPA had no comments on the Proposed permit.

17.0 Data Base Summary:

Permit Writer:	Barbara Georgitsis
Operating Permit No.:	0527-RN2
AIRS Number:	35/001/00026
SIC Code:	9711 – National Security
Facility Type:	Air Force Base
Company:	United States Air Force
Facility:	Kirtland Air Force Base
Type of Permit Action:	Title V Permit Renewal
Application Date:	Received on January 22, 2022, deemed administratively complete on October 29, 2022 with supplemental information received on July 28, 2022, August 31, 2022, October 30, 2023, March 5, 2024, April 12, 2024
Ruled Incomplete:	September 11, 2020
Ruled Admin. Complete:	October 29, 2022
Application Sent to EPA:	
Public Notice:	November 7, 2024
Comments Due:	December 7, 2024
Public Hearing:	
Proposed Permit to EPA:	
Permit Due:	
Permit Issued:	
Permit to EPA:	
Facility Location:	2050 Wyoming Blvd. SE
UTM ZONE:	13
UTMH:	355,960m
UTMV:	3,879,700m
Elevation:	1630m
County:	Bernalillo
Contact Name:	Carina Munoz-Dyer, Air Program Manager Phone: (505) 846-8781 Email: carina.munoz-dyer@us.af.mil
Contacts Address:	377 MSG/CE Environmental 2050 Wyoming Blvd, SE Kirtland AFB NM, 87117-5270

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