DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)
KIRTLAND AIR FORCE BASE, NEW MEXICO

27 May 2026

Colonel Justin D. Secrest
Commander
377th Air Base Wing
2000 Wyoming Blvd SE
Kirtland Air Force Base NM 87117

Mr. Paul J. Rogers
Director
Albuquerque Environmental Health Department
One Civic Plaza NW, 3rd Floor, Room 3023
Albuquerque NM 87102

Dear Mr. Rogers

Kirtland Air Force Base (AFB) respectfully requests an emergency permit to modify air quality construction permit #3090-RV1 for the government fuels distribution facilities that support mission-essential operations. This request is submitted pursuant to 20.11.41.24.A New Mexico Administrative Code (NMAC), which authorizes the Department to issue emergency permits when a situation threatens public health, safety, or welfare. The unforeseen failure of critical infrastructure has created an urgent need to modify authorized gasoline throughput limits to prevent an imminent disruption to national security missions and emergency response services.

Currently, the Government East fueling station (Station B) is inoperable and requires major repairs. This failure has forced all refueling operations to the Main Fuels Yard, causing monthly throughput to double over the past three months. Based on current data, Kirtland AFB anticipates exceeding its annual permitted limit of 90,000 gallons by September 2026. Because the standard permitting process cannot be completed before this potential exceedance occurs, an emergency permit is necessary to ensure the installation remains in regulatory compliance while maintaining uninterrupted fueling operations for essential services.

Failure to modify Construction Permit #3090-RV1 by September 2026 will result in a conflict between Kirtland AFB's regulatory obligations and its national security missions, including Kirtland AFB's emergency response capabilities.

This situation meets the definition of an "emergency" under 20.11.41.7.N NMAC, which characterizes unforeseen circumstances resulting in imminent and substantial endangerment to health and safety as requiring immediate action. Upon approval, Kirtland AFB will continue to operate in accordance with all applicable standards and emission limits. Furthermore, the installation remains committed to participating in the Albuquerque Environmental Health Department's public involvement process as required by 20.11.41.24.C NMAC.

My point of contact for any questions regarding this submittal is Mr. Isreal Tavarez, Kirtland AFB Chief, Environmental Management, at (505) 846-8546 or by email at isreal.tavarez@us.af.mil.

Sincerely

SECREST.JUSTIN.D.1078711082
Digitally signed by SECREST.JUSTIN.D.1078711082
Date: 2026.05.27 15:46:25 -06'00'

JUSTIN D. SECREST, Colonel, USAF
Commander

Kirtland Air Force Base

20.11.41 NMAC Application for an Emergency Permit to Modify Permit No. 3090-RV1 Government Fuel Distribution Facility

377 MSG/CE Environmental
Kirtland AFB, New Mexico

Application received June 1, 2026

Contents

Section 1 – Executive Summary

Kirtland Air Force Base (AFB) is submitting an application for an emergency permit to modify Permit #3090-RV1 in accordance with 20.11.41.13.E and 20.11.41.24 New Mexico Administrative Code (NMAC). The requested modification seeks to increase the permitted throughput of Unit #1, which consists of a 5,000-gallon aboveground storage tank (AST) and affiliated loading arm, from 90,000 gallons per year to 140,000 gallons per year. All other equipment remains the same and unchanged from Permit #3090-RV1. Emissions estimates for the AST in Unit #1 were calculated with an updated throughput using U.S. Environmental Protection Agency (EPA) TANKS v. 4.09d software maintained in the Air Force's Air Pollution Information Management System (APIMS) database. Emissions estimates for the loading arm in Unit #1 were calculated using emission factors from AP-42 Section 5.2: Transportation and Marketing of Petroleum Liquids, Table 5.2-1 (June 2008). Supporting documentation for historic calculations for Units #2, #3, and #4 is included for reference. Unit #1 is subject to 40 CFR 63 Subpart BBBBBB, and Units #2, #3, and #4 are subject to 40 CFR 63 Subpart CCCCCC. Application forms, emissions calculations, and all required elements under 20.11.41 NMAC are included in the following sections.

Section 2 – General Information

In accordance with 20.11.41.13.E NMAC, this application submittal includes all the requirements set forth by the department, including:

- Application form
- Owner and operator's name and mailing address
- Application date
- Sufficient attachments including calculations, potential emission rate, nature of all regulated contaminants, and actual emissions
- Operational and maintenance strategy
- Facility map
- Aerial photograph of location of each emission unit
- Complete description of all sources of regulated air contaminants and process flow diagram
- Full description of air pollutant control equipment
- Description of equipment or method used for emission measurements
- Maximum and normal operating time schedules of the sources
- Other relevant information
- Applicant signature
- Registration fee

Pursuant to 20.11.72 NMAC, a Best Achievable Control Technology (BACT) analysis is not required for emergency permit applications under 20.11.41.24.A NMAC. Additionally, air dispersion modeling is not required for the gasoline fuel dispensing operations in accordance with the City of Albuquerque Air Quality Program's May 2024 Air Dispersion Modeling Guidelines. All application forms are included in Attachment A.

Section 2.1 – Facility Description

Table 1 summarizes the four emission units included in this application and lists the associated AQUIS IDs. Emissions are included in Attachment C for each source grouping from Table 1 and emissions are summarized in the permit application forms.

Kirtland AFB stores jet fuel and diesel fuel in aboveground storage tanks at the Government Fuel Distribution facility. Because jet fuel and diesel fuel have vapor pressures below 10 mm Hg, the storage and handling of these fuels are classified as insignificant activities, consistent with previous determinations in Title V Operating Permit #0527-RN2. Additionally, the jet fuel and diesel fuel operations are exempt from vapor loss control provisions under 20.11.65.16 NMAC; therefore, their regulatory status as insignificant emission sources remain unchanged in this permitting action. Jet fuel and diesel storage operations are listed in the permit application in Attachment A.

Table 1 – Summary of Permitted Fueling Operations

Process Equipment Unit No.	AQUIS ID	Description	Location
1	16001	Gasoline Loading	Main Fuels Yard Building 1041
	22005-2	Gasoline Storage	
2	15001	Gasoline Dispensing	Government East Service Station Building 20359
	22003 & 22004	Gasoline Storage	
3	15011	E85 Fuel Dispensing	Government East Service Station Building 20359
	22015	E85 Fuel Storage	
4	15004	Gasoline Dispensing	Government West Service Station Building 471
	25012	Gasoline Storage	

Main Fuels Yard:

Unit #1 consists of a gasoline storage tank (AQUIS ID 22005-2) and affiliated loading arm (AQUIS ID 16001). Unit #1 is located at the Main Fuels Yard and is adjacent to Building 1041. Operations involve transferring gasoline from commercial delivery trucks into the aboveground storage tank (AST) and subsequently transferring fuel from the AST into government-owned fuel trucks via submerged loading.

The AST associated with this loading operation has a capacity of 5,000 gallons and stores unleaded gasoline. The original permit for #3090-RV1 listed AQUIS ID 22005 as a 10,000-gallon capacity tank. However, in 2018, an equipment substitution occurred and the 10,000-gallon tank was substituted with the current 5,000-gallon tank. This equipment substitution was formally captured and reflected in Title V Operating Permit #0527-RN2 and is being updated in this permit modification for consistency. Kirtland AFB requests the operation at Unit #1 be limited to a throughput of 140,000 gallons per year and a maximum daily throughput of less than 20,000 gallons per day to maintain classification as an existing bulk gasoline plant under 40 CFR 63 Subpart BBBBBB.

Fuel loaded into government-owned delivery trucks at Unit #1 are utilized to distribute fuel to operations across the installation. This includes serving as a back-up fuel supply for the Government East and West Service Stations, as well as supporting other permitted Kirtland AFB mission activities and independent leaseholders located within the installation boundaries.

Government East Service Station:

Unit #2 consists of two gasoline storage tanks (AQUIS IDs 22003 & 22004) and an affiliated dispensing operation (AQUIS ID 15001). Unit #2 is located at the Government East Service Station, located adjacent to Building 20359, and is used to dispense gasoline to government vehicles. Operations involve transferring fuel from commercial and base-owned delivery trucks into two ASTs and transferring fuel from the ASTs into government vehicles via two fuel dispensers. Each gasoline AST has a capacity of 10,000 gallons and is equipped with a submersible pump to deliver fuel to the dispenser. Each dispenser has two nozzles, providing for a total of four dispensing pumps.

The Government East Service Station also stores and dispenses E85 fuel to government vehicles. E85 is an alcohol fuel blend that contains a mixture of 85% denatured fuel ethanol and 15% gasoline by volume. Unit #3 consists of the E85 fuel storage (AQUIS ID 22015) and dispensing operation and is located adjacent to Building 20359. Operations involve transferring fuel from commercial delivery trucks into the AST and transferring fuel from the AST into vehicles via the dispenser. The E85 AST has a capacity of 10,000 gallons and is equipped with a submersible pump to deliver fuel to the dispenser. The dispenser has two nozzles.

No modifications are proposed for the Government East Service Station in this permit application. All equipment will continue to adhere to the throughput and emission limits established in Permit #3090-RV1.

Government West Service Station:

Unit #4 consists of the gasoline storage (AQUIS ID 25012) and dispensing (AQUIS ID 15004) operation at the Government West Service Station, located adjacent to Building 471. Unit #4 is used to dispense gasoline to government vehicles. Operations include transferring fuel from delivery trucks into an AST installed in a below-grade vault, and dispensing fuel from the below-grade vaulted AST into vehicles. The gasoline tank has a capacity of 3,000 gallons and is equipped with a submersible pump to deliver fuel to the dispenser. The dispenser has two nozzles.

No modifications are proposed for the Government West Service Station in this permit application. All equipment will continue to adhere to the throughput and emission limits established in Permit #3090-RV1.

This modification requests to increase the permitted throughput of Unit #1 (AQUIS IDs 22005-2 and 16001) located at the Main Fuels Yard from 90,000 gallons per year to 140,000 gallons per year.

Section 2.2 – Process Flow Diagrams and Emission Unit Locations

Diagram for Storage Tank and Fuel Loading Operations

The simplified process flow diagram represents the gasoline storage and loading operations for Unit #1 AQUIS IDs 22005-2 and 16001.

Process Flow Diagram
for the Storage Tank and Fuel Loading Operation
(Unit #1 AQUIS IDs 22005-2 and 16001)

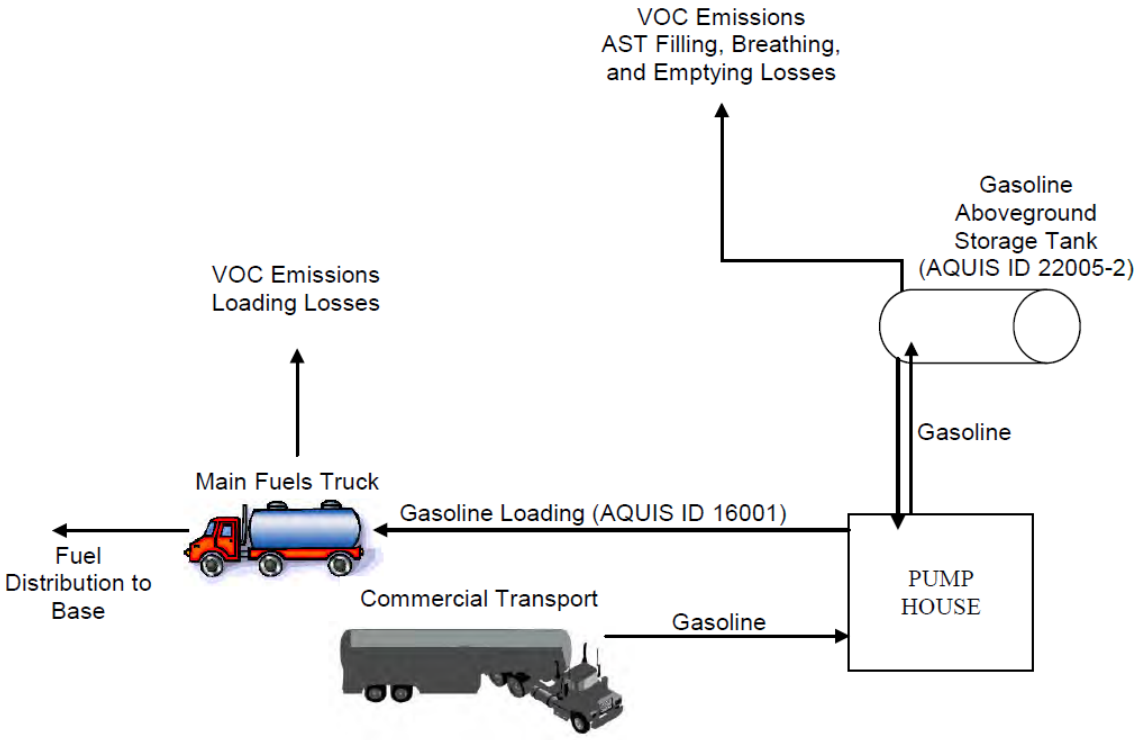
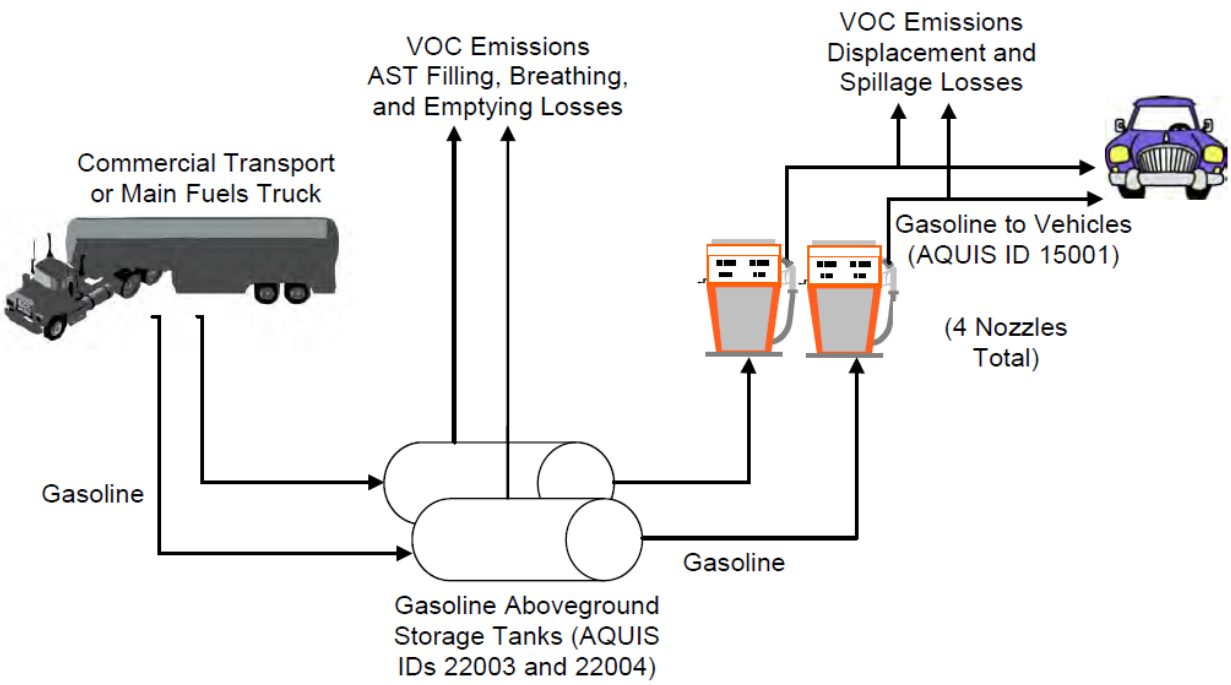


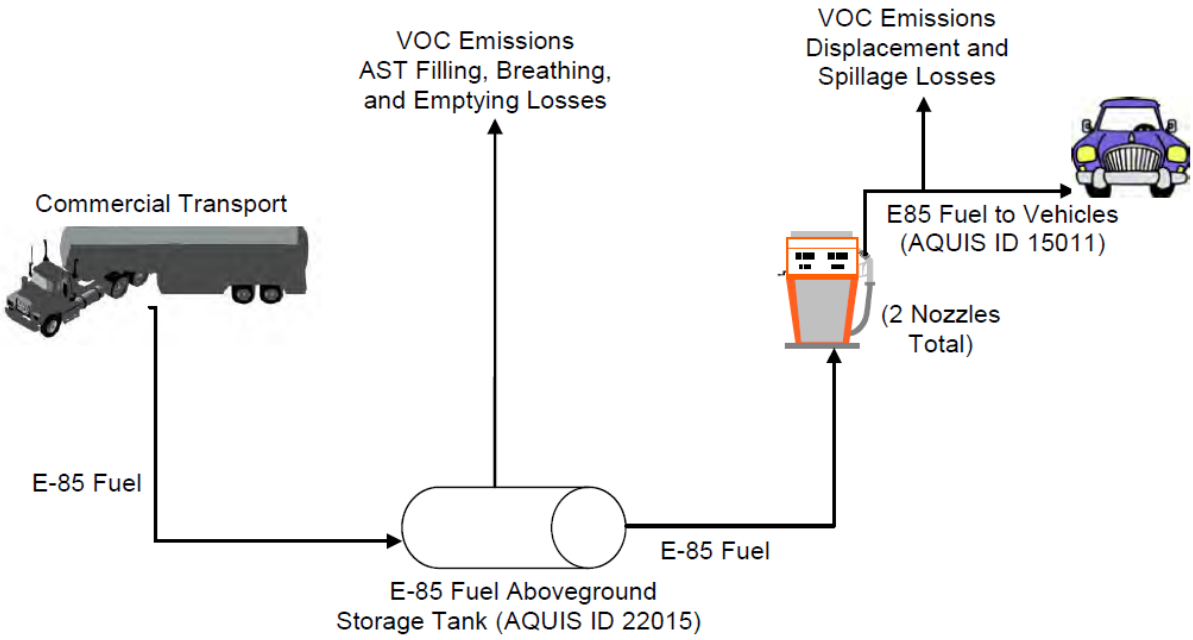
Diagram for Storage Tank and Fuel Dispensing Operations

The storage tank and fuel dispensing operations involve transferring fuel from delivery trucks into the ASTs and transferring fuel from the ASTs into vehicles via the dispenser. The following process flow diagrams represent operations for Units #2 (AQUIS IDs 22003, 22004, and 15001), #3 (AQUIS IDs 22015 and 15011), and #4 (AQUIS IDs 25012 and 15004).

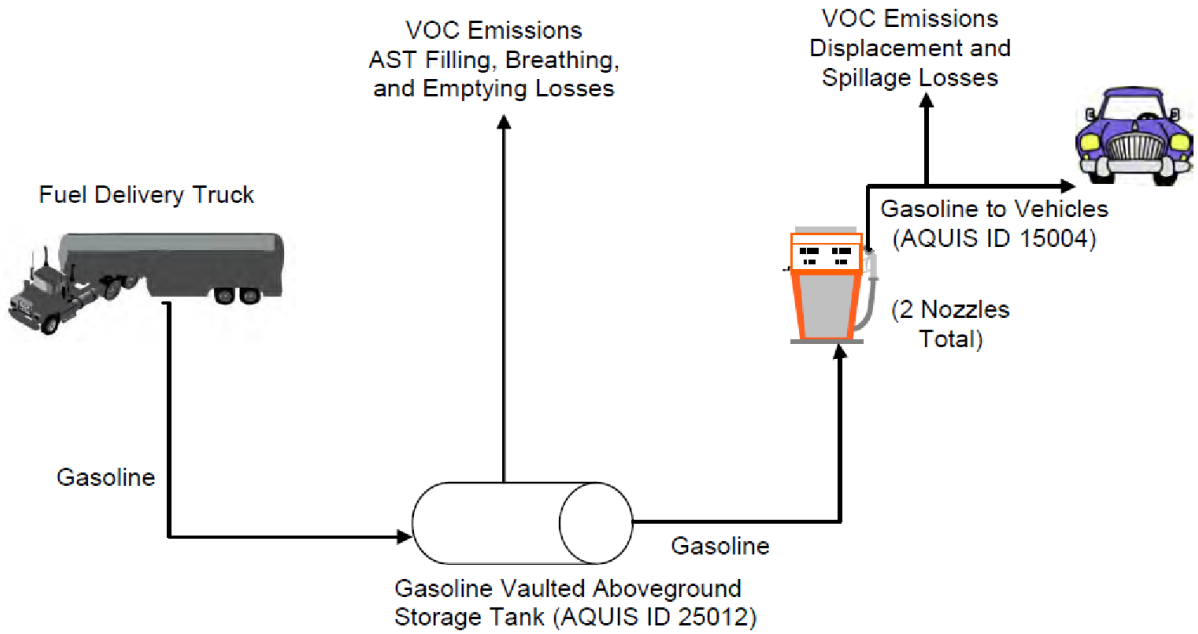
Process Flow Diagram
for the Storage Tank and Fuel Dispensing Operation
(Unit #2 AQUIS IDs 22003, 22004, and 15001)



Process Flow Diagram
for the Storage Tank and Fuel Dispensing Operation
(Unit #3 AQUIS IDs 22015 and 15011)



Process Flow Diagram
for the Storage Tank and Fuel Dispensing Operation
(Unit #4 AQUIS IDs 25012 and 15004)



Additionally, a scaled map of Kirtland AFB illustrating the locations of Government Fuels Distribution Operations equipment is in Attachment B. Refer to the emission unit list in the Permit Application Form to identify the AQUIS ID.

Section 2.3 – Emissions Calculations and Methodology

Across all emission units, volatile organic compound (VOC) emissions represent the primary pollutant of concern and form the basis for established emission limits. Hazardous air pollutant (HAP) emissions are calculated strictly as a fractional subset of total VOC emissions utilizing historic chemical profiles maintained in the Air Force's Air Pollution Information Management System (APIMS) database. Kirtland AFB is not requesting separate HAP emission limits but is including these emissions estimates to demonstrate fuel speciation.

Hourly, annual, and potential emissions, including calculation methodologies for each emission source are included in Attachment C. Total emissions for the Government Fuels Distribution Operations are also summarized in Attachment C. The following sections summarize the methodologies utilized for each emission unit.

Section 2.3.1 – Storage Tanks

VOC emissions from gasoline fuel storage in ASTs were estimated using EPA TANKS v. 4.09d software for Unit #1 (AQUIS ID 22005-2), Unit #2 (AQUIS IDs 22003 and 22004), and Unit #3 (AQUIS ID 22015). The TANKS v. 4.09d program is maintained within the Air Force's APIMS database. The software estimates emissions from breathing losses and working losses, which includes the filling and emptying of the tank.

For Unit #1 (AQUIS ID 22005-2), the TANKS output was updated to reflect the 5,000-gallon capacity tank and the requested throughput of 140,000 gallons per year limit. Emissions estimates and throughput limits for Unit #2 (AQUIS IDs 22003 and 22004) and Unit #3 (AQUIS ID 22015) remain unchanged from the original application for Permit #3090-RV1. TANKS outputs are included in Attachment D for Units #1 (AQUIS ID 22005-2), #2 (AQUIS IDs 22003 & 22004), and #3 (AQUIS ID 22015). Corresponding calculation steps are detailed in the emissions calculation spreadsheets in Attachment C.

For the vaulted AST in Unit #4 (AQUIS ID 25012), fuel storage emissions were estimated using AP-42 emission factors for underground tank filling, breathing, and emptying losses. Although Unit #4 (AQUIS ID 25012) is an AST, the application of AP-42 emission factors for underground tanks is appropriate due to the tank's installation within a below-grade vault. This methodology remains unchanged from the application submitted for Permit #3090-RV1 for Unit #4 (AQUIS ID 25012). Please note that Permit #3090-RV1 inadvertently included a condition requiring the use of TANKS software for this unit, which was never proposed in the permit application. Kirtland AFB respectfully requests the modified permit align with the methodology outlined in this application.

Section 2.3.2 – Fuel Characterization and Software Profiles for TANKS v. 4.09d Software

Gasoline RVP-13 was selected from AP-42 Section 7.1: Organic Liquid Storage Tanks, Table 7.1-2 (September 2025) to conservatively represent maximum gasoline volatility for operations at Unit #1 (AQUIS ID 22005-2) and Unit #2 (AQUIS IDs 22003 & 22004). TANKS software lacks a standard profile for E85 fuel. Therefore, a custom profile was developed for Unit #3 (AQUIS ID 22015) utilizing conservative assumptions similar in nature to the RVP-13 profile for gasoline.

Section 2.3.3 – Fuel Loading Operations

VOC emissions resulting from loading operations associated with Unit #1 (AQUIS ID 16001) were estimated using the loading loss methodology in AP-42 Section 5.2, Transportation and Marketing of Petroleum Liquids, Table 5.2-1 (June 2008). This calculation relies on the physical properties of the specific fuel being transferred to determine the volume of vapor displaced during the loading process. Since the loading arm affiliated with Unit #1 (AQUIS ID 16001) receives gasoline directly from the AST associated with Unit #1 (AQUIS ID 22005-2), the properties of gasoline loaded are identical to those of the gasoline stored. Key variables required

for the loading loss equation from AP-42 Section 5.2, Transportation and Marketing of Petroleum Liquids (June 2008) were extracted from the TANKS 4.09d output report generated for Unit #1 (AQUIS ID 22005-2). Specifically, variables for the bulk liquid temperature of gasoline and true vapor pressure of gasoline were obtained directly from the TANKS 4.09d results for Unit #1 (AQUIS ID 22005-2) to provide a site-specific emission profile and accurately reflect the conditions of the stored gasoline. The loading loss factor was multiplied by the requested annual throughput of 140,000 gallons per year to calculate the total annual VOC emissions for the loading operation.

Section 2.3.4 – Fuel Dispensing Operations

VOC emissions resulting from displacement and spillage during vehicle and equipment refueling operations at Unit #2 (AQUIS ID 15001), Unit #3 (AQUIS ID 15011), and Unit #4 (AQUIS ID 15004) were estimated using AP-42 Section 5.2, Transportation and Marketing of Petroleum Liquids, Table 5.2-7 (June 2008). The calculation methodology remains unchanged from the previous application for Permit #3090-RV1. This methodology accounts for both the vapors displaced from a vehicle's fuel tank as it is filled, along with the minor spillage that naturally occurs when a fuel nozzle is inserted and removed. For gasoline dispensing at Unit #2 (AQUIS ID 15001) and Unit #4 (AQUIS ID 15004), the standard AP-42 combined emission factor was utilized directly. The same gasoline displacement and spillage factors were applied to Unit #3 (AQUIS ID 15011) in the absence of a factor for E85 fuel dispensing.

Section 2.3.5 – Conservative Assumptions and Vapor Balance

To remain consistent with the historical approach used to develop Permit #3090-RV1, uncontrolled emission factors were applied universally across all transfer operations to keep facility-wide emissions conservative. Commercial cargo trucks delivering gasoline and E85 fuel to Kirtland AFB, and the installation's back-up refueler is equipped with vapor balance systems. While these systems effectively capture residual vapors and prevent onsite releases, a conservative approach was utilized in this application. All onsite loading, dispensing, and tank filling emissions were estimated assuming the absence of vapor balance or other emission controls.

Section 2.4 – Federal Applicability

Unit #1 is subject to 40 CFR 63 Subpart BBBBBB as an existing source. Units #2, #3, and #4 are subject to 40 CFR 63 Subpart CCCCCC as existing sources. A process equipment table listing applicable federal regulations are in Attachment E.

Section 2.5 – Operational Plan – Air Emissions During SSM

The Government Fuels Distribution facility is owned and operated by the U.S. Government in conjunction with Kirtland AFB. In the event of an equipment malfunction, operations at the affected unit will be immediately suspended. As soon as a malfunction occurs, applicable equipment will be shut down to ensure no excess emissions or non-permitted emissions are

released. Operations will not resume until the malfunction is addressed, and the facility will operate as normal and permitted.

Section 2.5.1 – Gasoline Storage and Dispensing Operations

Emissions from gasoline storage and dispensing operations are primarily associated with routine evaporative losses and are dependent on fuel throughput and storage conditions. Startup and shutdown activities for these units are not expected to result in emission rates that differ from those during normal operations.

The facility operates and maintains storage tanks and dispensing equipment in accordance with facility procedures and standard industry practices to minimize the potential for malfunctions and associated excess emissions. These procedures are designed to ensure mechanical integrity and minimize the potential for malfunctions or fugitive releases. Operational and maintenance practices include, but are not limited to, the following:

- Monthly visual inspections of the tanks, associated equipment, and secondary containment to identify leaks, damaged fittings, missing caps, or other deficiencies.
- Maintaining gasketed seals on all openings and fittings while ASTs are not actively in use.
- Implementing spill prevention practices during fuel delivery and dispensing activities.
- Performing prompt cleanup of spills, as expeditiously as practicable, in accordance with facility procedures.

These practices ensure proper operation of equipment and minimize emissions through good housekeeping, routine inspection, and timely corrective action. Any malfunction that results in excess emissions will be addressed promptly and reported as required.

Section 3 – Attachments

Attachment A – Agency Forms and Documentation

- A-1 Permit Application
- A-2 Permit Application Checklist
- A-3 Permit Review Fee Checklist
- A-4 Zoning Certification Documentation
- A-5 Compliance History Disclosure Form
- A-6 Pre-Application Meeting Checklist and Supporting Documentation

Attachment B – Facility Map

Attachment C – Emissions Calculations

Attachment D – Supporting Documentation

- D-1 Unit #1 AQUIS ID 22005-2 TANKS 4.09 Revised Outputs: PTE & Annual Emissions
- D-2 Unit #2 AQUIS IDs 22003 and 22004 TANKS 4.09d Historic Outputs: PTE & Annual Emissions
- D-3 Unit #3 AQUIS ID 22015 TANKS 4.09d Historic Outputs: PTE & Annual Emissions

Attachment E – Applicable Federal Regulations

Attachment A

Agency Forms and Documentation

Attachment A-1

Permit Application

City of Albuquerque – Environmental Health Department
Air Quality Program

Please mail this application to **P.O. Box 1293, Albuquerque, NM 87103**
or hand deliver between 8:00 am – 5:00 pm Monday – Friday to:
3rd Floor, Suite 3023 – One Civic Plaza NW, Albuquerque, NM 87102
(505) 768-1972 aqd@cabq.gov

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

Submittal Date:
01 JUNE 2026

Owner/Corporate Information ☐ **Check here and leave this section blank if information is exactly the same as Facility Information below.**

Company Name: **U.S. Air Force - Kirtland Air Force Base (KAFB)**			
Mailing Address: **377 MSG/CEIEC, 2050 Wyoming Blvd SE, Suite A-112**	City: **Kirtland AFB**	State: **NM**	Zip: **87117-5270**
Company Phone: **(505) 846-8546**	Company Contact: **Isreal Tavarez**		
Company Contact Title: **Chief, Environmental Management**	Phone: **(505) 846-8546**	E-mail: **isreal.tavarez@us.af.mil**	

Stationary Source (Facility) Information: **Provide a plot plan (legal description/drawing of the facility property) with overlay sketch of facility processes, location of emission points, pollutant type, and distances to property boundaries.**

Facility Name: **Government Fuels Distribution**			
Facility Physical Address: **Various - Fuel distribution locations Building 1041 (Randolph Rd SE & Fuel Dr SE), Building 20359 (1st St & K Ave), and Building 471 (Maxwell St SE & Aberdeen Dr SE), Kirtland AFB, NM 87117-5270**	City: **Kirtland AFB**	State: **NM**	Zip: **87117-5270**
Facility Mailing Address (if different): **377 MSG/CEIEC, 2050 Wyoming Blvd SE, Suite A-112**	City: **Kirtland AFB**	State: **NM**	Zip: **87117-5270**
Facility Contact: **Isreal Tavarez**	Title: **Chief, Environmental Management**		
Phone: **(505) 846-8546**	E-mail: **isreal.tavarez@us.af.mil**		
Authorized Representative Name[1]: **Isreal Tavarez**	Authorized Representative Title: **Chief, Environmental Management**		

Billing Information ☐ **Check here if same contact and mailing address as corporate** ☐ **Check here if same as facility**

Billing Company Name: **U.S. Air Force - Kirtland Air Force Base (AFB)**			
Mailing Address: **377 MSG/CEIEC, 2050 Wyoming Blvd SE, Suite A-106**	City: **Albuquerque**	State: **NM**	Zip: **87117-5270**
Billing Contact: **Carina G. Munoz-Dyer**	Title: **Air Quality Program Manager**		
Phone: **(505) 846-8781**	E-mail: **carina.munoz-dyer@us.af.mil**		

Preparer/Consultant(s) Information ☐ **Check here and leave section blank if no Consultant used or Preparer is same as Facility Contact.**

Name: **Elizabeth Pomo**	Title: **Air Quality Scientist IV**		
Mailing Address: **105A Fordham Rd**	City: **Oak Ridge**	State: **TN**	Zip: **37830**
Phone: **(505) 908-1483**	Email: **elizabeth.pomo.ctr@us.af.mil**		

1. See 20.11.41.13(E)(13) NMAC.

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

General Operation Information (if any question does not pertain to your facility, type N/A on the line or in the box)

Permitting action being requested (please refer to the definitions in 20.11.40 NMAC or 20.11.41 NMAC):			
☐ New Permit	☒ Permit Modification Current Permit #: **3090-RV1 Emergency Permit Request**	☐ Technical Permit Revision Current Permit #:	☐ Administrative Permit Revision Current Permit #:
☐ New Registration Certificate	☐ Modification Current Reg. #:	☐ Technical Revision Current Reg. #:	☐ Administrative Revision Current Reg. #:

UTM coordinates of facility (Zone 13, NAD 83): **Various - see Attachment E for UTM coordinates of all emission units**	
Facility type (*i.e.*, a description of your facility operations): **Unit 1 Main Fuels Yard: Loads base fuel trucks for use in dispensing fuel to equipment, as a backup fuel supply, and as a main fuel supply for small ASTs on base; Unit 2 Government East Station: Dispenses gasoline to government vehicles, including Air Force Fleet and GSA vehicles; Unit 3 Government West Station: Dispenses E85 to government vehicles, including Air Force Fleet and GSA vehicles; Unit 4 Government West Station: Dispenses gasoline to government vehicles, including Air Force Fleet and GSA vehicles**	
Standard Industrial Classification (SIC Code #): **9711**	North American Industry Classification System (NAICS Code #): **928110**
Is this facility currently operating in Bernalillo County? **Yes**	If **YES**, list date of original construction: **1964 (est)** If **NO**, list date of planned startup:
Is the facility permanent? **Yes**	If **NO**, list dates for requested temporary operation: From Through
Is the facility a portable stationary source? **No**	If **YES**, is the facility address listed above the main permitted location for this source?
Is the application for a physical or operational change, expansion, or reconstruction (*e.g.*, altering process, or adding, or replacing process or control equipment, etc.) to an existing facility? **No**	
Provide a description of the requested changes: **Requesting to increase permitted throughput for Unit #1 (AQ IDs 22005-2 and 16001) to 140,000 gal/yr. Requesting Units #2 (AQ IDs 22003, 22004, 15001), #3 (AQ IDs 22015 and 15011), and #4 (AQ IDs 25012 and 15004) to remain the same with existing throughput and emission limits.**	
What is the facility's operation? ☐ Continuous ☒ Intermittent ☐ Batch	

Estimated percent of production/operation:	Jan-Mar: **25**	Apr-Jun: **25**	Jul-Sep: **25**	Oct-Dec: **25**
Requested operating times of facility:	**24** hours/day	**7** days/week	**4** weeks/month	**12** months/year

Will there be special or seasonal operating times other than shown above? This includes monthly- or seasonally-varying hours. **No**
If **YES**, please explain: **N/A**
List raw materials processed: **N/A**
List saleable item(s) produced: **N/A**

USE INSTRUCTIONS: For the forms on the following pages, please do not alter or delete the existing footnotes or page breaks. If additional footnotes are needed then add them to the end of the existing footnote list for a given table. Only update the rows and cells within tables as necessary for your project. Unused rows can be deleted from tables. If multiple scenarios will be represented then the Uncontrolled and Controlled Emission Tables, and other tables as needed, can be duplicated and adjusted to indicate the different scenarios.

Regulated Emission Sources Table

(*E.g.*, Generator-Crusher-Screen-Conveyor-Boiler-Mixer-Spray Guns-Saws-Sander-Oven-Dryer-Furnace-Incinerator-Haul Road-Storage Pile, etc.) Match the Units listed on this Table to the same numbered line if also listed on Emissions Tables & Stack Table.

Unit Number and Description[1]		Manufacturer	Model #	Serial #	Manufacture Date	Installation Date	Modification Date[2]	Process Rate or Capacity (Hp, kW, Btu, ft^3, lbs, tons, yd^3, etc.)[3]	Fuel Type
1	**Fuel Storage, Main Fuels Yard Building 1041 AQ ID 22005-2**	**N/A**	**N/A**	**N/A**	**N/A**	**05/2018**	**N/A**	**5,000 gal**	**Gasoline**
	Fuel Loading, Main Fuels Yard Building 1041 AQ ID 16001	**N/A**	**N/A**	**N/A**	**N/A**	**1964**	**N/A**	**N/A**	
2	**Fuel Storage, Govt East Service Station, Building 20359 AQ ID 22003**	**N/A**	**N/A**	**N/A**	**N/A**	**1995**	**N/A**	**10,000 gal**	**Gasoline**
	Fuel Storage, Govt East Service Station, Building 20359 AQ ID 22004	**N/A**	**N/A**	**N/A**	**N/A**	**1995**	**N/A**	**10,000 gal**	
	Fuel Dispensing, Govt East Service Station, Building 20359 AQ ID 15001	**N/A**	**N/A**	**N/A**	**N/A**	**1995**	**N/A**	**N/A**	
3	**Fuel Storage, Govt East Service Station, Building 20359 AQ ID 22015**	**N/A**	**N/A**	**N/A**	**N/A**	**08/2008 (est)**	**N/A**	**10,000 gal**	**E85**
	Fuel Dispensing, Govt East Service Station, Building 20359 AQ ID 15011	**N/A**	**N/A**	**N/A**	**N/A**	**08/2008 (est)**	**N/A**	**N/A**	
4	**Fuel Storage, Govt West Service Station, Building 471 AQ ID 25012**	**N/A**	**N/A**	**N/A**	**N/A**	**1997**	**N/A**	**3,000 gal**	**Gasoline**
	Fuel Dispensing, Govt West Service Station, Building 471 AQ ID 15004	**N/A**	**N/A**	**N/A**	**N/A**	**1997**	**N/A**	**N/A**	

NOTE: To add extra rows in Word, click anywhere in the last row. A plus (+) sign should appear on the bottom right corner of the row. Click the plus (+) sign to add a row. Repeat as needed.

1. Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provided.
2. To determine whether a unit has been modified, evaluate if changes have been made to the unit that impact emissions or that trigger modification as defined in 20.11.41.7(U) NMAC. If not, put N/A.
3. Basis for Equipment Process Rate or Capacity (*e.g.*, Manufacturer's Data, Field Observation/Test, etc.) **Field Observation**
   Submit information for each unit as an attachment.

Emissions Control Equipment Table

Control Equipment Units listed on this Table should either match up to the same Unit number as listed on the Regulated Emission Sources, Controlled Emissions and Stack Parameters Tables (if the control equipment is integrated with the emission unit) or should have a distinct Control Equipment Unit Number and that number should then also be listed on the Stack Parameters Table.

Control Equipment Unit Number and Description		Controlling Emissions for Unit Number(s)	Manufacturer	Model # | Serial #	Date Installed	Controlled Pollutant(s)	% Control Efficiency[1]	Method Used to Estimate Efficiency	Rated Process Rate or Capacity or Flow
Ex. 8b	Baghouse	3,4,5	Best Baghouses	C-12010 | A16925	11/12/2019	PM_{10}, $PM_{2.5}$	99%	Manufacturer's Data	1,500 ACFM
	N/A	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
				|					
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NOTE: To add extra rows in Word, click anywhere in the last row. A plus (+) sign should appear on the bottom right corner of the row. Click the plus (+) sign to add a row. Repeat as needed.

1. Basis for Control Equipment % Efficiency (*e.g.*, Manufacturer's Data, Field Observation/Test, AP-42, etc.). _____
   Submit information for each unit as an attachment.

Exempted Sources and Exempted Activities Table

See 20.11.41 NMAC for exemptions.

Unit Number and Description		Manufacturer	Model #	Serial #	Manufacture Date	Installation Date	Modification Date[1]	Process Rate or Capacity (Hp, kW, Btu, ft^3, lbs, tons, yd^3, etc.)[2]	Fuel Type
Ex. 1.	Boiler	Unigen	B-2500	A567321C	7/1996	7/1997	11/2020	3.5 MMBtu/HR	Natural Gas
Ex. 2.	Hot Water Heater	HVLP Systems	6500A	K26-56-95	01/2017	11/2017	N/A	80 gal./HR	Natural Gas
	N/A	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

NOTE: To add extra rows in Word, click anywhere in the last row. A plus (+) sign should appear on the bottom right corner of the row. Click the plus (+) sign to add a row. Repeat as needed.

1. To determine whether a unit has been modified, evaluate if changes have been made to the unit that impact emissions or that trigger modification as defined in 20.11.41.7(U) NMAC. Also, consider if any changes that were made alter the status from exempt to non-exempt. If not, put N/A.
2. Basis for Equipment Process Rate or Capacity (*e.g.*, Manufacturer's Data, Field Observation/Test, etc.) _____
   Submit information for each unit as an attachment.

Uncontrolled Emissions Table

(Process potential under physical/operational limitations during a 24 hr/day and 365 day/year = 8760 hrs)

Regulated Emission Units listed on this Table should match up to the same numbered line and Unit as listed on the Regulated Emissions and Controlled Tables. List total HAP values per Emission Unit if overall HAP total for the facility ≥ 1 ton/yr.

Unit Number*	Nitrogen Oxides (NO_X)		Carbon Monoxide (CO)		Nonmethane Hydrocarbons/Volatile Organic Compounds (NMHC/VOCs)		Sulfur Dioxide (SO_2)		Particulate Matter ≤ 10 Microns (PM_{10})		Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)		Hazardous Air Pollutants (HAPs)		Method(s) used for Determination of Emissions (AP-42, Material Balance, Field Tests, etc.)
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	
Example 1.	27.7	121.3	9.1	39.9	1.3	5.7	0.5	2.2	2.0	8.8	0.2	0.4	0.2	0.4	AP-42 Section 3.3
1 AQ ID 22005-2 Gasoline Storage	**0**	**0**	**0**	**0**	**30.56**	**133.85**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**EPA TANKS v4.09d**
1 AQ ID 16001 Gasoline Loading	**0**	**0**	**0**	**0**	**108.96**	**477.27**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**AP-42 Section 5.2**
2 AQ ID 22003 Gasoline Storage	**0**	**0**	**0**	**0**	**2.76**	**12.09**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**EPA TANKS v4.09d**
2 AQ ID 22004 Gasoline Storage	**0**	**0**	**0**	**0**	**2.76**	**12.09**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**EPA TANKS v4.09d**
2 AQ ID 15001 Gasoline Dispensing	**0**	**0**	**0**	**0**	**28.08**	**122.99**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**AP-42 Section 5.2**
3 AQ ID 22015 E85 Storage	**0**	**0**	**0**	**0**	**3.75**	**16.41**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**EPA TANKS v4.09d**
3 AQ ID 15011 E85 Dispensing	**0**	**0**	**0**	**0**	**14.04**	**61.50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**AP-42 Section 5.2**
4 AQ ID 25012 Gasoline Storage	**0**	**0**	**0**	**0**	**9.96**	**43.62**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**AP-42 Section 5.2**

Unit Number*	Nitrogen Oxides (NO_X)		Carbon Monoxide (CO)		Nonmethane Hydrocarbons/Volatile Organic Compounds (NMHC/VOCs)		Sulfur Dioxide (SO_2)		Particulate Matter ≤ 10 Microns (PM_{10})		Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)		Hazardous Air Pollutants (HAPs)		Method(s) used for Determination of Emissions (AP-42, Material Balance, Field Tests, etc.)
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	
4 AQ ID 15004 Gasoline Dispensing	**0**	**0**	**0**	**0**	**14.04**	**61.50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**AP-42 Section 5.2**
Totals of Uncontrolled Emissions	**0**	**0**	**0**	**0**	**214.91**	**941.31**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

NOTE: To add extra rows in Word, click anywhere in the second-to-last row. A plus (+) sign should appear on the bottom right corner of the row. Click the plus (+) sign to add a row. Repeat as needed.

*A permit is required and this application along with the additional checklist information requested on the Permit Application checklist must be provided if:

(1) any one of these process units or combination of units, has an uncontrolled emission rate greater than or equal to (≥) 10 lbs/hr or 25 tons/yr for any of the above pollutants, excluding HAPs, based on 8,760 hours of operation; or

(2) any one of these process units or combination of units, has an uncontrolled emission rate ≥ 2 tons/yr for any single HAP or ≥ 5 tons/yr for any combination of HAPs based on 8,760 hours of operation; or

(3) any one of these process units or combination of units, has an uncontrolled emission rate ≥ 5 tons/yr for lead (Pb) or any combination of lead and its compounds based on 8,760 hours of operation; or

(4) any one of the process units or combination of units is subject to an Air Board or federal emission limit or standard.

* If all of these process units, individually and in combination, have an uncontrolled emission rate less than (<) 10 lbs/hr or 25 tons/yr for all of the above pollutants (based on 8,760 hours of operation), but > 1 ton/yr for any of the above pollutants, then a source registration is required. A Registration is required, at minimum, for any amount of HAP emissions. Please complete the remainder of this form.

Controlled Emissions Table

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

Regulated Emission Units listed on this Table should match up to the same numbered line and Unit as listed on the Regulated Emissions and Uncontrolled Tables. List total HAP values per Emission Unit if overall HAP total for the facility is ≥ 1 ton/yr.

Unit Number	Nitrogen Oxides (NO_X)		Carbon Monoxide (CO)		Nonmethane Hydrocarbons/Volatile Organic Compounds (NMHC/VOCs)		Sulfur Dioxide (SO_2)		Particulate Matter ≤ 10 Microns (PM_{10})		Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)		Hazardous Air Pollutants (HAPs)		Control Method	% Efficiency[1]
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr		
Example 1.	27.7	55.4	9.1	18.2	1.3	2.6	0.5	1.0	2.0	4.0	0.2	0.088	0.2	0.088	Operating Hours	N/A
1 AQ ID 22005-2 Gasoline Storage	**0**	**0**	**0**	**0**	**30.56**	**1.78**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Fuel Throughput 140,000 gal/yr**	**N/A**
1 AQ ID 16001 Gasoline Loading	**0**	**0**	**0**	**0**	**108.96**	**0.42**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Fuel Throughput 140,000 gal/yr**	**N/A**
2 AQ ID 22003 Gasoline Storage	**0**	**0**	**0**	**0**	**2.76**	**3.78**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Fuel Throughput 510,000 gal/yr**	**N/A**
2 AQ ID 22004 Gasoline Storage	**0**	**0**	**0**	**0**	**2.76**	**2.90**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Fuel Throughput 210,000 gal/yr**	**N/A**
2 AQ ID 15001 Gasoline Dispensing	**0**	**0**	**0**	**0**	**28.08**	**4.04**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Fuel Throughput 690,000 gal/yr**	**N/A**
3 AQ ID 22015 E85 Storage	**0**	**0**	**0**	**0**	**3.75**	**5.70**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Fuel Throughput 510,000 gal/yr**	**N/A**

Unit Number	Nitrogen Oxides (NO_X)		Carbon Monoxide (CO)		Nonmethane Hydrocarbons/Volatile Organic Compounds (NMHC/VOCs)		Sulfur Dioxide (SO_2)		Particulate Matter ≤ 10 Microns (PM_{10})		Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)		Hazardous Air Pollutants (HAPs)		Control Method	% Efficiency[1]
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr		
3 AQ ID 15011 E85 Dispensing	**0**	**0**	**0**	**0**	**14.04**	**2.98**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Fuel Throughput 510,000 gal/yr**	**N/A**
4 AQ ID 25012 Gasoline Storage	**0**	**0**	**0**	**0**	**9.96**	**0.58**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Fuel Throughput 140,000 gal/yr**	**N/A**
4 AQ ID 15004 Gasoline Dispensing	**0**	**0**	**0**	**0**	**14.04**	**0.82**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Fuel Throughput 140,000 gal/yr**	**N/A**
Totals of Controlled Emissions	**0**	**0**	**0**	**0**	**214.91**	**23.01**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		

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1. Basis for Control Method % Efficiency (*e.g.*, Manufacturer's Data, Field Observation/Test, AP-42, etc.). **N/A**
   Submit information for each unit as an attachment.

Hazardous Air Pollutants (HAPs) Emissions Table

Report the Potential Emission Rate for each HAP from each source on the Regulated Emission Sources Table that emits a given HAP. Report individual HAPs with ≥ 1 ton/yr total emissions for the facility on this table. Otherwise, report total HAP emissions for each source that emits HAPs and report individual HAPs in the accompanying application package in association with emission calculations. If this application is for a Registration solely due to HAP emissions, report the largest HAP emissions on this table and the rest, if any, in the accompanying application package.

Unit Number	Total HAPs		Benzene		Toluene		Ethylbenzene		Xylene		1,1,2-Trichloroethane		Chlorobenzene		Hexane	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Example 1.	6.3	18.2	3.2	8.5	2.3	7.7	0.5	1.0	0.3	1.0	N/A	N/A	N/A	N/A	N/A	N/A
N/A	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
1 AQ ID 22005-2 Gasoline Storage	**1.43**	**0.084**	**0.48**	**0.028**	**0.64**	**0.038**	**0.067**	**0.0039**	**0.23**	**0.014**	**0.0061**	**0.00036**	**0**	**0**	**0**	**0**
1 AQ ID 16001 Gasoline Loading	**5.11**	**0.020**	**1.72**	**0.0067**	**2.30**	**0.0089**	**0.24**	**0.00093**	**0.83**	**0.0032**	**0.022**	**0.000085**	**0**	**0**	**0**	**0**
2 AQ ID 22003 Gasoline Storage	**0.13**	**0.18**	**0.044**	**0.060**	**0.058**	**0.080**	**0.0061**	**0.0083**	**0.021**	**0.029**	**0.00055**	**0.00076**	**0**	**0**	**0**	**0**
2 AQ ID 22004 Gasoline Storage	**0.13**	**0.14**	**0.044**	**0.046**	**0.058**	**0.061**	**0.0061**	**0.0064**	**0.021**	**0.022**	**0.00055**	**0.00058**	**0**	**0**	**0**	**0**
2 AQ ID 15001 Gasoline Dispensing	**1.32**	**0.19**	**0.44**	**0.064**	**0.59**	**0.085**	**0.062**	**0.0089**	**0.21**	**0.031**	**0.0056**	**0.00081**	**0**	**0**	**0**	**0**
3 AQ ID 22015 E85 Storage	**0.26**	**0.39**	**0.059**	**0.090**	**0.079**	**0.12**	**0.0082**	**0.013**	**0.028**	**0.043**	**0.00075**	**0.0011**	**0.00075**	**0.0011**	**0.070**	**0.11**
3 AQ ID 15011 E85 Dispensing	**0.97**	**0.21**	**0.22**	**0.047**	**0.30**	**0.063**	**0.031**	**0.0066**	**0.11**	**0.023**	**0.0028**	**0.00060**	**0.0028**	**0.00060**	**0.26**	**0.055**
4 AQ ID 25012	**0.47**	**0.027**	**0.16**	**0.0092**	**0.21**	**0.012**	**0.022**	**0.0013**	**0.076**	**0.0044**	**0.0020**	**0.00012**	**0**	**0**	**0**	**0**

Unit Number	Total HAPs		Benzene		Toluene		Ethylbenzene		Xylene		1,1,2-Trichloroethane		Chlorobenzene		Hexane	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Gasoline Storage																
4 AQ ID 15004 Gasoline Dispensing	**0.66**	**0.038**	**0.22**	**0.013**	**0.30**	**0.017**	**0.031**	**0.0018**	**0.11**	**0.0062**	**0.0028**	**0.00016**	**0**	**0**	**0**	**0**
Totals of HAPs for all units:	**10.47**	**1.27**	**3.40**	**0.36**	**4.53**	**0.49**	**0.47**	**0.051**	**1.63**	**0.17**	**0.043**	**0.0046**	**0.0036**	**0.0017**	**0.33**	**0.16**

NOTE: HAP emissions are derived from VOC emissions via speciation and represent a subset of total VOC emissions. VOC is the pollutant of concern and basis for emission limits; HAP emissions are not independently limited.

NOTE: To add extra rows in Word, click anywhere in the second-to-last row. A plus (+) sign should appear on the bottom right corner of the row. Click the plus (+) sign to add a row. Repeat as needed.

Use Instructions: Copy and paste the HAPs table here if need to list more individual HAPs.

Purchased Hazardous Air Pollutant Table*

Product Categories (Coatings, Solvents, Thinners, etc.)	Hazardous Air Pollutant (HAP), or Volatile Hazardous Air Pollutant (VHAP) Primary To The Representative As Purchased Product	Chemical Abstract Service (CAS) Number of HAP or VHAP from Representative As Purchased Product	HAP or VHAP Concentration of Representative As Purchased Product (pounds/gallon, or %)	Concentration Determination (CPDS, SDS, etc.)[1]	Total Product Purchases For Category	(-)	Quantity of Product Recovered & Disposed For Category	(=)	Total Product Usage For Category
Example 1. Surface Coatings	Xylene	1330207	4.0 lbs/gal	SDS	lb/yr 100 gal/yr	(-)	lb/yr 0 gal/yr	(=)	lb/yr 100 gal/yr
Example 2. Cleaning Solvents	Toluene	108883	70%	Product Label	lb/yr 200 gal/yr	(-)	lb/yr 50 gal/yr	(=)	lb/yr 150 gal/yr
1. N/A	**N/A**	**N/A**	**N/A**	**N/A**	lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
2.					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
3.					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
4.					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
5.					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
6.					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
7.					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
8.					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
9.					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
.					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr
TOTALS					lb/yr gal/yr	(-)	lb/yr gal/yr	(=)	lb/yr gal/yr

NOTE: To add extra rows in Word, click anywhere in the second-to-last row. A plus (+) sign should appear on the bottom right corner of the row. Click the plus (+) sign to add a row. Repeat as needed.

NOTE: Product purchases, recovery/disposal and usage should be converted to the units listed in this table. If units cannot be converted please contact the Air Quality Program prior to making changes to this table.

1. 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. CPDS = Certified Product Data Sheet; SDS = Safety Data Sheet

*** A Registration is required, at minimum, for any amount of HAP or VHAP emission.**
Emissions from purchased HAP usage should be accounted for on previous tables as appropriate.
A permit may be required for these emissions if the source meets the requirements of 20.11.41 NMAC.

Material and Fuel Storage Table

(*E.g.*, Tanks, barrels, silos, stockpiles, etc.)

Storage Equipment		Product Stored	Capacity (bbls, tons, gals, acres, etc.)	Above or Below Ground	Construction (Welded, riveted) & Color	Installation Date	Loading Rate[1]	Offloading Rate[1]	True Vapor Pressure	Control Method	Seal Type	% Eff.[2]
Ex. 1.	Tank	Diesel Fuel	5,000 gal.	Below	Welded/Brown	3/1993	3,000 gal/hr	500 gal/hr	N/A	N/A	N/A	N/A
Ex. 2.	Barrels	Solvent	55 gal. drum	Above	Welded/Green	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1 AQ ID 22005-2	**AST**	**Gasoline**	**5,000 gal**	**Above**	**Welded/White**	**05/2018**	**300 gal/min**	**300 gal/min**	**6.76 psia**	**None**	**N/A**	**N/A**
2 AQ ID 22003	**AST**	**Gasoline**	**10,000 gal**	**Above**	**Welded/White**	**1995**	**1,200 gal/hr**	**1,200 gal/hr**	**6.76 psia**	**None**	**N/A**	**N/A**
2 AQ ID 22004	**AST**	**Gasoline**	**10,000 gal**	**Above**	**Welded/White**	**1995**	**1,200 gal/hr**	**1,200 gal/hr**	**6.76 psia**	**None**	**N/A**	**N/A**
3 AQ ID 22015	**AST**	**E85**	**10,000 gal**	**Above**	**Welded/White**	**08/2008 (est)**	**1,200 gal/hr**	**1,200 gal/hr**	**7.93 psia**	**None**	**N/A**	**N/A**
4 AQ ID 25012	**Vaulted AST**	**Gasoline**	**3,000 gal**	**Below Grade Vault**	**Welded/White**	**1997**	**1,200 gal/hr**	**1,200 gal/hr**	**6.76 psia**	**None**	**N/A**	**N/A**
N/A AQ ID 22001	**AST**	**Diesel**	**6,000 gal**	**Above**	**Welded/White**	**1988**	**N/A**	**N/A**	**<0.1 psia**	**None**	**N/A**	**N/A**
N/A AQ ID 22002	**AST**	**Diesel**	**10,000 gal**	**Above**	**Welded/White**	**1964**	**N/A**	**N/A**	**<0.1 psia**	**None**	**N/A**	**N/A**
N/A AQ ID 22006-2	**AST**	**Diesel**	**10,000 gal**	**Above**	**Welded/White**	**1968**	**N/A**	**N/A**	**<0.1 psia**	**None**	**N/A**	**N/A**
N/A AQ ID 25008	**Vaulted AST**	**Diesel**	**3,000 gal**	**Below Grade Vault**	**Welded/White**	**1997**	**N/A**	**N/A**	**<0.1 psia**	**None**	**N/A**	**N/A**
N/A AQ ID 22016	**AST**	**Jet Fuel**	**1,700,000 gal**	**Above**	**Welded/White**	**2011**	**N/A**	**N/A**	**<0.1 psia**	**None**	**Vapor Mounted**	**N/A**
N/A AQ ID 22017	**AST**	**Jet Fuel**	**1,700,000 gal**	**Above**	**Welded/White**	**2011**	**N/A**	**N/A**	**<0.1 psia**	**None**	**Vapor Mounted**	**N/A**

NOTE: To add extra rows in Word, click anywhere in the last row. A plus (+) sign should appear on the bottom right corner of the row. Click the plus (+) sign to add a row. Repeat as needed.

1. Basis for Loading/Offloading Rate (*e.g.*, Manufacturer's Data, Field Observation/Test, etc.). **N/A**
   Submit information for each unit as an attachment.
2. Basis for Control Method % Efficiency (*e.g.*, Manufacturer's Data, Field Observation/Test, AP-42, etc.). **N/A**
   Submit information for each unit as an attachment.

Stack Parameters Table

If any equipment from the Regulated Emission Sources Table is also listed in this Stack Table, use the same numbered line for the emission unit on both tables to show the association between the Process Equipment and its stack.

Unit Number and Description		Pollutant (CO, NOx, PM_{10}, etc.)	UTM Easting (m)	UTM Northing (m)	Stack Height (ft)	Stack Exit Temp. (°F)	Stack Velocity (fps)	Stack Flow Rate (acfm)	Stack Inside Diameter (ft)	Stack Type
Ex. 1.	Generator	CO, NOx, PM_{10}, $PM_{2.5}$, SO_2	349430.28	3884014.64	18	900 °F	150 fps	4524 acfm	0.8	Rain Cap
Ex. 2.	Spray Gun	PM_{10}, xylene, toluene	348540.1	3882928.5	9.2	Ambient	50 fps	589 acfm	0.5	Vertical
	N/A	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**Select**

NOTE: To add extra rows in Word, click anywhere in the last row. A plus (+) sign should appear on the bottom right corner of the row. Click the plus (+) sign to add a row. Repeat as needed.

Certification

NOTICE REGARDING SCOPE OF A PERMIT: The Environmental Health Department's issuance of an air quality permit only authorizes the use of the specified equipment pursuant to the air quality control laws, regulations and conditions. Permits relate to air quality control only and are issued for the sole purpose of regulating the emission of air contaminants from said equipment. Air quality permits are not a general authorization for the location, construction and/or operation of a facility, nor does a permit authorize any particular land use or other form of land entitlement. It is the applicant's/permittee's responsibility to obtain all other necessary permits from the appropriate agencies, such as the City of Albuquerque Planning Department or Bernalillo County Department of Planning and Development Services, including but not limited to site plan approvals, building permits, fire department approvals and the like, as may be required by law for the location, construction and/or operation of a facility. For more information, please visit the City of Albuquerque Planning Department website at https://www.cabq.gov/planning and the Bernalillo County Department of Planning and Development Services website at https://www.bernco.gov/planning.

NOTICE REGARDING ACCURACY OF INFORMATION AND DATA SUBMITTED: Any misrepresentation of a material fact in this application and its attachments is cause for denial of a permit or revocation of part or all of the resulting registration or permit, and revocation of a permit for cause may limit the permitee's ability to obtain any subsequent air quality permit for ten (10) years. Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan or other document filed or required to be maintained under the Air Quality Control Act, NMSA 1978 §§ 74-2-1 to 74-2-17, is guilty of a misdemeanor and shall, upon conviction, be punished by a fine of not more than ten thousand dollars ($10,000) per day per violation or by imprisonment for not more than twelve months, or by both.

I, the undersigned, hereby certify that I have knowledge of the information and data represented and submitted in this application and that the same is true and accurate, including the information and date in any and all attachments, including without limitation associated forms, materials, drawings, specifications, and other data. I also certify that the information represented gives a true and complete portrayal of the existing, modified existing, or planned new stationary source with respect to air pollution sources and control equipment. I understand that there may be significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. I also understand that the person who has applied for or has been issued an air quality permit by the Department is an obligatory party to a permit appeal filed pursuant to 20.11.81 NMAC. Further, I certify that I am qualified and authorized to file this application, to certify the truth and accuracy of the information herein, and bind the source. Moreover, I covenant and agree to comply with any requests by the Department for additional information necessary for the Department to evaluate or make a final decision regarding the application.

Signed this _____day of _____, 20_____

JUSTIN D. SECREST, Colonel, USAF
Print Name

SECREST.JUSTIN.D.1078711082 Digitally signed by SECREST.JUSTIN.D.1078711082 Date: 2026.05.27 15:47:06 -06'00'
Signature

Commander, 377th Air Base Wing
Print Title

Role: ☒ Owner ☐ Operator

☐ Other Authorized Representative

Attachment A-2

Permit Application Checklist

City of Albuquerque
Environmental Health Department
Air Quality Program

Construction Permit (20.11.41 NMAC)
Application Checklist

This checklist must be returned with the application

Any person seeking a new air quality permit, a permit modification, or an emergency permit under 20.11.41 NMAC (Construction Permits) shall do so by filing a written application with the Albuquerque-Bernalillo County Joint Air Quality Program, which administers and enforces local air quality laws for the City of Albuquerque ("City") and Bernalillo County ("County"), on behalf of the City Environmental Health Department ("Department").

The Department will rule an application administratively incomplete if it is missing or has incorrect information. The Department may require additional information that is necessary to make a thorough review of an application, including but not limited to technical clarifications, emission calculations, emission factor usage, additional application review fees if any are required by 20.11.2 NMAC, and new or additional air dispersion modeling.

If the Department has ruled an application administratively incomplete three (3) times, the Department will deny the permit application. Any fees submitted for processing an application that has been denied will not be refunded. If the Department denies an application, a person may submit a new application and the fee required for a new application. The applicant has the burden of demonstrating that a permit should be issued.

The following are the minimum elements that shall be included in the permit application before the Department can determine whether an application is administratively complete and ready for technical review. It is not necessary to include an element if the Department has issued a written waiver regarding the element and the waiver accompanies the application. However, the Department shall not waive any federal requirements.

At all times before the Department has made a final decision regarding the application, an applicant has a duty to promptly supplement and correct information the applicant has submitted in an application to the Department. The applicant's duty to supplement and correct the application includes but is not limited to relevant information acquired after the applicant has submitted the application and additional information the applicant otherwise determines is relevant to the application and the Department's review and decision. While the Department is processing an application, regardless of whether the Department has determined the application is administratively complete, if the Department determines that additional information is necessary to evaluate or make a final decision regarding the application, the Department may request additional information and the applicant shall provide the requested additional information.

NOTICE REGARDING PERMIT APPEALS: A person who has applied for or has been issued an air quality permit by the Department shall be an obligatory party to a permit appeal filed pursuant to 20.11.81 NMAC.

NOTICE REGARDING SCOPE OF A PERMIT: The Department's issuance of an air quality permit only authorizes the use of the specified equipment pursuant to the air quality control laws, regulations and conditions. Permits relate to air quality control only and are issued for the sole purpose of regulating the emission of air contaminants from said equipment. Air quality permits are not a general authorization for the location, construction and/or operation of a facility, nor does a permit authorize any particular land use or other form of land entitlement. It is the applicant's/permittee's responsibility to obtain all other necessary permits from the appropriate agencies, such as the City Planning Department or County Department of Planning and Development Services, including but not limited to site plan approvals, building permits, fire department approvals and the like, as may be required by law for the location, construction and/or operation of a facility. For more information, please visit the City Planning Department website at https://www.cabq.gov/planning and the County Department of Planning and Development Services website at https://www.bernco.gov/planning.

The Applicant shall:

20.11.41.13(A) NMAC – Pre-Application Requirements:

Item	Completed	N/A[1]	Waived[2]
(1) Request a pre-application meeting with the Department using the pre-application meeting request form. Include a copy of the request form submitted to the Department.	☒	☐	☐
(2) Attend the pre-application meeting. Date of pre-application meeting: **April 9, 2026**	☒	☐	☐
Pre-application meeting agenda and public notice sign checklists included with application?	☒	☐	☐

1. *Not Applicable*
2. *It is not necessary to include an element if the Department has issued a written waiver regarding the element and the waiver accompanies the application. However, the Department shall not waive any federal requirements.*

20.11.41.13(B) NMAC – Applicant's Public Notice Requirements:

Item	Included in Application	N/A[1]	Waived[2]
(1) Provide public notice in accordance with the regulation, including 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. The public notice shall include all information required by Subsection C of 20.11.41.13 NMAC. One mile radius required by 20.11.72.9 NMAC.	☐	☒	☐
• Contact list of representative(s) of recognized neighborhood associations and recognized coalitions cannot be more than three months old from the application submittal date. • Include memo with contact list provided by Department in application submittal.	☐	☒	☐
• Provide notice using the Notice of Intent to Construct form and Applicant Notice Cover Letter.	☐	☒	☐
(2) In accordance with the regulation, post and maintain a weather-proof sign provided by the Department in a visible location. The applicant shall keep the sign posted until the Department takes final action on the permit application. Include pictures in application showing location of sign and close-up showing information on sign.	☐	☒	☐
Documentary proof of all public notice requirements listed above and required by 20.11.41.13(E)(15) included with application?	☐	☒	☐

1. *Not Applicable; For emergency permits, the public notice requirements in 20.11.41.24 NMAC shall apply instead.*
2. *It is not necessary to include an element if the Department has issued a written waiver regarding the element and the waiver accompanies the application. However, the Department shall not waive any federal requirements.*

20.11.41.13(D) NMAC

Item	Included in Application
A person who is seeking a construction permit pursuant to 20.11.41 NMAC shall complete a permit application and file one complete original and one duplicate copy with the Department. If the original is printed double sided, then it must be printed head-to-toe (flip on the short edge).	☒
• A high-quality electronic duplicate copy is required by the Department to speed up review and allow for the Department public notice to be posted online. The electronic copy must be an exact duplicate of the hardcopy original, including pages with signatures such as the application certification page. Note: Do not include financial information, such as a copy of a check, in the electronic PDF.	☒
The electronic submittal on thumb drive, unless alternate method is allowed by the Department, must also include modeling files, if applicable, and emission calculations file(s) in Microsoft Excel-compatible format.	☒

The Permit Application shall include:

20.11.41.13(E) NMAC – Application Contents

Item	Included in Application	N/A[1]	Waived[2]
(1) A complete permit application on the most recent form provided by the Department.	☒	☐	☐
(2) The application form includes:			
a. The applicant's name, street and post office address, and contact information;	☒	☐	☐
b. The facility owner/ operator's name, street address and mailing address, if different from the applicant;	☒	☐	☐
c. The consultant's name and contact information, if applicable;	☒	☐	☐
d. All information requested on the application form is included (*i.e.*, the form is complete).	☒	☐	☐
(3) The date the application was submitted to the Department.	☒	☐	☐
(4) Sufficient attachments for the following:			
a. Ambient impact analysis using an atmospheric dispersion model approved by the U.S. Environmental Protection Agency, and the Department to demonstrate compliance with the applicable National Ambient Air Quality Standards (NAAQS). *See* 20.11.1 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.	☐	☒	☐
b. The air dispersion model has been executed pursuant to a protocol that was approved in advance by the Department.	☐	☒	☐
c. Air dispersion modeling approved (or 2nd denied) protocol date:	☐	☒	☐
d. Basis or source for each emission rate (including manufacturer's specification sheets, EPA Tier Certification for engines, AP-42 section sheets, test data, or corresponding supporting documentation for any other source used).	☒	☐	☐
e. All calculations used to estimate potential emission rates and controlled/proposed emissions.	☒	☐	☐
f. Basis for the estimated control efficiencies and sufficient engineering data for verification of the control equipment operation, including if necessary, design, drawing, test report and factors which affect the normal operation.	☒	☐	☐
g. Fuel data for each existing and/or proposed piece of fuel burning equipment.	☐	☒	☐
h. Anticipated maximum production capacity of the entire facility and the requested production capacity after construction and/or modification.	☒	☐	☐
i. Stack and exhaust gas parameters for all existing and proposed emission stacks.	☐	☒	☐
(5) An operational and maintenance strategy detailing:	☒	☐	☐
a. the steps the applicant will take if a malfunction occurs that may cause emission of a regulated air contaminant to exceed a limit that is included in the permit;	☒	☐	☐
b. the nature of emissions during routine startup or shutdown of the source and the source's air pollution control equipment; and	☒	☐	☐
c. the steps the applicant will take to minimize emissions during routine startup or shutdown.	☒	☐	☐
(6) A map, such as a 7.5' topographic quadrangle map published by the U.S. Geological Survey or a map of equivalent or greater scale, detail and precision, including a City or County zone atlas map that shows the proposed location of the source. Show proposed/ existing process equipment locations on aerial photograph requested in item 7.	☒	☐	☐

Item	Included in Application	N/A[1]	Waived[2]
(7) 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.	☒	☐	☐
(8) A complete description of all sources of regulated air contaminants and	☒	☐	☐
a. a process flow diagram depicting the process equipment unit or units at the facility, both existing and proposed, that are proposed to be involved in routine operations and from which regulated air contaminant emissions are expected to be emitted. Include fugitive emission points as well.	☒	☐	☐
(9) A full description of air pollution control equipment, including all calculations and the basis for all control efficiencies presented, manufacturer's specifications sheets, and site layout and assembly drawings; UTM (universal transverse mercator) coordinates shall be used to identify the location of each emission unit.	☒	☐	☐
(10) A description of the equipment or methods proposed by the applicant to be used for emission measurement.	☒	☐	☐
(11) The maximum and normal operating time schedules of the source after completion of construction or modification, as applicable.	☒	☐	☐
(12) Any other relevant information as the Department may reasonably require, including without limitation:	☒	☐	☐
a. Provide an applicability determination for all potentially applicable federal regulations.	☒	☐	☐
b. Applicants shall provide the Zoning Requirement Cover Letter Form, along with documentary proof that the proposed air quality permitted use of the facility's subject property is allowed by the zoning designation of the City or County zoning laws, as applicable. Sufficient documentation includes: (i) a zoning certification from the City Planning Department or County Department of Planning and Development Services, as applicable, if the property is subject to City or County zoning jurisdiction; or (ii) a zoning verification from both planning departments if the property is not subject to City or County zoning jurisdiction.[3] A zone atlas map shall not be sufficient.	☒	☐	☐
c. Compliance History Disclosure Form[4]	☒	☐	☐
d. BACT Analysis, if applicable, for new permit or permit modification applications.	☐	☒	☐
(13) The signature of the applicant, operator, owner or an authorized representative, certifying to the accuracy of all information as represented in the application and attachments, if any.	☒	☐	☐
(14) A check or money order for the appropriate application fee or fees required by 20.11.2 NMAC, *Fees*. (Online fee payments are now accepted as well. Application must be submitted first, then Department will provide invoice for online payment. Check box on Application Review Fee Checklist form to request invoice.)	☒	☐	☐

1. *Not Applicable*
2. *It is not necessary to include an element if the Department has issued a written waiver regarding the element and the waiver accompanies the application. However, the Department shall not waive any federal requirements.*
3. *Applicants are not required to submit documentation for the subject property's zoning designation when applying for a relocation of a portable stationary source, or a technical or administrative revision to an existing permit.*
4. *Required for applications filed pursuant to the following regulations: Construction Permits (20.11.41 NMAC); Operating Permits (20.11.42 NMAC); Nonattainment Areas (20.11.60 NMAC); Prevention of Significant Deterioration (20.11.61 NMAC); and Acid Rain (20.11.62 NMAC); except this Form shall not be required for asbestos notifications under 20.11.20.22 NMAC, and this Form shall only be required for administrative permit revision (20.11.41.28(A) NMAC) and administrative permit amendments (20.11.42.12(E)(1) NMAC) when the action requested is a transfer of ownership. Air Quality Program staff can answer basic questions about the Compliance History Disclosure Form but will not provide specific advice about which boxes to check or whether information must be disclosed. The decision about how to answer a question and whether there is information to disclose is the responsibility of applicants/permittees.*

Attachment A-3

Permit Review Fee Checklist

City of Albuquerque
Environmental Health Department
Air Quality Program

Permit Application Review Fee Checklist Instructions

All source registration and construction permit applications for stationary or portable sources shall be charged an application review fee according to the fee schedule in 20.11.2 NMAC. These filing fees are required for both new construction, reconstruction, and permit modification/revision applications. Most air quality notification (AQN) applications shall be charged an application review fee according to 20.11.39 NMAC. Qualified small businesses as defined in 20.11.2 NMAC may be eligible to pay one-half of the application review fees and 100% of all applicable federal program review fees.

Please fill out the permit application review fee checklist completely and submit with a check or money order payable to the "City of Albuquerque Fund 242" and:

1. Deliver it in person to the Albuquerque Environmental Health Department, 3rd Floor, Room 3023, Albuquerque-Bernalillo County Government Center, South Building, One Civic Plaza NW, Albuquerque, NM 87102; or

2. Mail it to Albuquerque Environmental Health Department, Air Quality Program, Permitting Division, P.O. Box 1293, Albuquerque, NM 87103; or

3. Online fee payments are now accepted as well. Application must be submitted first, then Department will provide invoice for online payment. Fill out form completely and mark check box below fee amount due on last page to request an invoice to pay the fee online.

The Department will provide a receipt of payment to the applicant. The person delivering or filing a submittal shall attach a copy of the receipt of payment to the submittal as proof of payment. Application review fees shall not be refunded without the written approval of the manager. If a refund is requested, a reasonable professional service fee to cover the costs of staff time involved in processing such requests shall be assessed. Please refer to 20.11.2 NMAC (effective January 10, 2011) for more detail concerning the "Fees" regulation as this checklist does not relieve the applicant from any applicable requirement of the regulation.

Special Instructions for Sections II and III
If your facility is applying for a new construction permit or modification subject to 20.11.41 NMAC, check either the review fee for stationary sources subject to 20.11.41 NMAC and not subject to proposed allowable emission rates **OR** check one of the review fees based on proposed allowable emission rates.

Then also check any additional Federal Program or Major Modification Review Fees that apply.
The Federal Program Review Fees apply to each subpart review that is triggered by this permitting action. Enter the number of subparts on the applicable line. For example, if you are installing a new boiler subject to 40 CFR 60, Subpart Dc, and a new emergency engine subject to 40 CFR 60, Subpart IIII, you would need to pay the 40 CFR 60 NSPS Federal Program Review Fee twice. The same would apply if units are being modified or replaced. However, if you are installing two emergency engines subject to 40 CFR 60, Subpart IIII, you would only pay the fee once because the fee is 'per subpart' not 'per unit'.

For modifications, the Federal Program fees only apply if a unit being modified is subject to federal regulations.

City of Albuquerque
Environmental Health Department
Air Quality Program

Permit Application Review Fee Checklist Effective January 1, 2026 – December 31, 2026

Please completely fill out the information in each section. Incompleteness of this checklist may result in the Albuquerque Environmental Health Department not accepting the application review fees. If you have any questions concerning this checklist, please call (505) 768-1972.

I. COMPANY INFORMATION:

Company Name	U.S. Air Force - Kirtland Air Force Base		
Company Address	377 MSG/CEIEC, 2050 Wyoming Boulevard SE, Suite A-112 Kirtland AFB, NM 87117-5270		
Facility Name	Government Fuels Distribution		
Facility Address	Building 1041 (Randolph Rd SE & Fuel Dr SE), Building 20359 (1st St & K Ave), and Building 471 (Maxwell St SE & Aberdeen Dr SE), Kirtland AFB, NM 87117-5270		
Contact Person	Isreal Tavarez, Chief of Environmental Management		
Contact Person Phone Number	(505) 846-8546	**Email**	isreal.tavarez@us.af.mil
Are these application review fees for an existing permitted source located within the City of Albuquerque or Bernalillo County?	**Yes** ☒	**No** ☐	
If yes, what is the current permit/registration/AQN number for this facility?	**Permit #** 3090-RV1		
Is this application review fee for a Qualified Small Business as defined in 20.11.2 NMAC? (See Definition of Qualified Small Business on Page 4)	**Yes** ☐	**No** ☒	

II. STATIONARY SOURCE APPLICATION REVIEW FEES:

If the application is for a new stationary source facility, please check all that apply. If this application is for a modification to an existing permit please see Section III. For revisions or relocations please see Sections IV or V.

Check All That Apply	Stationary Sources	Review Fee	Program Element
	Air Quality Notifications		
☐	AQN New Application	$720	2801
☐	AQN Technical Amendment	$393	2802
☐	AQN Transfer of a Prior Authorization	$393	2803
☒	*Not Applicable*	*See Sections Below*	
	Stationary Source Review Fees		
☐	Source Registration required by 20.11.40 NMAC	$734	2401
☐	A stationary source that requires a permit pursuant to 20.11.41 NMAC or other board regulation and **is not** subject to the below proposed allowable emission rates	$1,467	2301
	A stationary source that requires a permit pursuant to 20.11.41 NMAC and **is** subject to review fees based on the proposed allowable emission rate for the single highest fee pollutant	Check the appropriate tpy range below	
☐	Proposed Allowable Emission Rate equal to or greater than 1 tpy and less than 5 tpy	$1,101	2302
☐	Proposed Allowable Emission Rate equal to or greater than 5 tpy and less than 25 tpy	$2,201	2303
☐	Proposed Allowable Emission Rate equal to or greater than 25 tpy and less than 50 tpy	$4,402	2304
☐	Proposed Allowable Emission Rate equal to or greater than 50 tpy and less than 75 tpy	$6,603	2305
☐	Proposed Allowable Emission Rate equal to or greater than 75 tpy and less than 100 tpy	$8,804	2306
☐	Proposed Allowable Emission Rate equal to or greater than 100 tpy	$11,005	2307

☒	*Not Applicable*	*See Sections Below*

Federal Program Review Fees for each subpart (In addition to the Stationary Source Application Review Fees above)				
☐	40 CFR 60 – "New Source Performance Standards" (NSPS)	x	$1,467	2308
☐	40 CFR 61 – "National Emission Standards for Hazardous Air Pollutants" (NESHAPs)	x	$1,467	2309
☐	40 CFR 63 – (NESHAPs) Promulgated Standards	x	$1,467	2310
☐	20.11.64 – (NESHAPs) Case-by-Case MACT Review (Major HAP sources)	x	$14,674	2311
☐	20.11.61 NMAC – Prevention of Significant Deterioration (PSD) Permit	x	$7,337	2312
☐	20.11.60 NMAC – Non-Attainment Area Permit	x	$7,337	2313
	Total Federal Program Review Fees		$	
☒	*Not Applicable*		*Not Applicable*	

III. MODIFICATION TO EXISTING PERMIT APPLICATION REVIEW FEES:

If the application is for a modification to an existing permit, please check all that apply. If this application is for a new stationary source facility, please see Section II. For revisions or relocations please see Sections IV or V.

Check All That Apply	Modifications		Review Fee	Program Element
Modification Application Review Fees				
☐	Proposed modification to an existing stationary source that requires a permit pursuant to 20.11.41 NMAC or other board regulation and **is not** subject to the below proposed allowable emission rates		$1,467	2321
	Proposed modification to an existing stationary source that requires a permit pursuant to 20.11.41 NMAC and **is** subject to review fees based on the proposed allowable emission rate for the single highest fee pollutant		Check the appropriate tpy range below	
☐	Proposed Allowable Emission Rate equal to or greater than 1 tpy and less than 5 tpy		$1,101	2322
☒	Proposed Allowable Emission Rate equal to or greater than 5 tpy and less than 25 tpy		$2,201	2323
☐	Proposed Allowable Emission Rate equal to or greater than 25 tpy and less than 50 tpy		$4,402	2324
☐	Proposed Allowable Emission Rate equal to or greater than 50 tpy and less than 75 tpy		$6,603	2325
☐	Proposed Allowable Emission Rate equal to or greater than 75 tpy and less than 100 tpy		$8,804	2326
☐	Proposed Allowable Emission Rate equal to or greater than 100 tpy		$11,005	2327
☐	*Not Applicable*		*See Sections Below*	
Major Modifications Review Fees (In addition to the Modification Application Review Fees above)				
☐	20.11.60 NMAC – Permitting in Non-Attainment Areas		$7,337	2333
☐	20.11.61 NMAC – Prevention of Significant Deterioration		$7,337	2334
☐	*Not Applicable*		*Not Applicable*	
Federal Program Review Fees for each subpart (This section applies only if a Federal Program Review is triggered by the proposed modification) (These fees are in addition to the Modification and Major Modification Application Review Fees above)				
☐	40 CFR 60 – "New Source Performance Standards" (NSPS)	x	$1,467	2328
☐	40 CFR 61 – "National Emission Standards for Hazardous Air Pollutants" (NESHAPs)	x	$1,467	2329
☒	40 CFR 63 – (NESHAPs) Promulgated Standards	x	$1,467	2330
☐	20.11.64 – (NESHAPs) Case-by-Case MACT Review (Major HAP sources)	x	$14,674	2331
☐	20.11.61 NMAC – Prevention of Significant Deterioration (PSD) Permit	x	$7,337	2332
☐	20.11.60 NMAC – Non-Attainment Area Permit	x	$7,337	2333
	Total Federal Program Review Fees		$	
☐	*Not Applicable*		*Not Applicable*	

IV. ADMINISTRATIVE AND TECHNICAL REVISION APPLICATION REVIEW FEES:

If the application is for an administrative or technical revision of an existing registration or permit issued pursuant to 20.11.40 or 20.11.41 NMAC, please check one that applies. For revisions to registrations, check Administrative Revisions.

Check One	Revision Type	Review Fee	Program Element
☐	Administrative Revisions	$250	2340
☐	Technical Revisions	$500	2341
☒	*Not Applicable*	*See Sections II, III or V*	

V. PORTABLE STATIONARY SOURCE RELOCATION FEES:

If the application is for a portable stationary source relocation of an existing permit, please check one that applies.

Check One	Portable Stationary Source Relocation Type	Review Fee	Program Element
☐	No New Air Dispersion Modeling Required	$500	2501
☐	New Air Dispersion Modeling Required	$750	2502
☒	*Not Applicable*	*See Sections II, III or IV*	

VI. Please submit payment in the amount shown for the total application review fee.

Section Totals	Review Fee Amount
Section II Total	$
Section III Total	$3,668
Section IV Total	$
Section V Total	$
Total Application Review Fee	**$3,668**

☐ **Check here if an invoice is requested so Application Review Fee can be paid online.**

I, the undersigned, a responsible officer of the applicant company, certify that to the best of my knowledge, the information stated on this checklist gives a true and complete representation of the permit application review fees which are being submitted. I also understand that an incorrect submittal of permit application reviews may cause an incompleteness determination of the submitted permit application and that the balance of the appropriate permit application review fees shall be paid in full prior to further processing of the application.

Signed this _____ day of _____ , 20 _____

JUSTIN D. SECREST, Colonel, USAF
Print Name

Commander, 377th Air Base Wing
Print Title

_____
Signature

Definition of Qualified Small Business as defined in 20.11.2 NMAC:
"Qualified small business" means a business that meets all of the following requirements:

(1) a business that has 100 or fewer employees;
(2) a small business concern as defined by the federal Small Business Act;
(3) a source that emits less than 50 tons per year of any individual regulated air pollutant, or less than 75 tons per year of all regulated air pollutants combined; and
(4) a source that is not a major source or major stationary source.

Note: Beginning January 1, 2011, and every January 1 thereafter, an increase based on the consumer price index shall be added to the application review fees. The application review fees established in Subsection A through D of 20.11.2.18 NMAC shall be adjusted by an amount equal to the increase in the consumer price index for the immediately-preceding year. Application review fee adjustments equal to or greater than fifty cents ($0.50) shall be rounded up to the next highest whole dollar. Application review fee adjustments totaling less than fifty cents ($0.50) shall be rounded down to the next lowest whole dollar. The department shall post the application review fees on the city of Albuquerque environmental health department air quality program website.

Attachment A-4

Zoning Certification Documentation

Planning & Development Services Department
415 Silver Ave. SW, 2nd Floor
Albuquerque, New Mexico 87102
Office: (505) 314-0350
Fax: (505) 314-0480
www.bernco.gov

February 29, 2024

Carina G. Munoz-Dyer
377 MSG/CEIEC, Air Quality Program Manager
2050 Wyoming Blvd SE, B20685, Room A-106
Kirtland AFB, NM 87117

Re: Bernalillo County zoning regulations and federally owned parcels

To Whom It May Concern:

This letter shall certify that Bernalillo County zoning regulations are not applicable to U.S. Federal Government nor U.S. Federal Government entity owned properties. This includes properties located within the boundary of Kirtland Air Force Base. Bernalillo County is willing to assist federal entities with necessary permits, building permits for example, if approached by a federal entity.

This certification statement only references the applicability of the Zoning Ordinance as it applies to the aforementioned properties.

Do not hesitate to contact me if you have questions concerning this matter at 314-0499 or at mgould@bernco.gov.

Sincerely,

Maggie Gould
Zoning Administrator

CC: Carina.munoz-dyer@us.af.mil

CITY OF ALBUQUERQUE

CODE ENFORCEMENT
Plaza Del Sol Building, Suite 500
600 2nd Street NW
Albuquerque, NM 87102
Tel: (505) 924-3850 Fax: (505) 924-3847

Date: March 15, 2024

VIA Email, Carina.munoz-dyer@us.af.mil
Carina G. Munoz-Dyer
2050 Wyoming Blvd SE, B20685, Room A-106
Kirtland AFB, NM 87117

RE: City of Albuquerque Zoning Regulations and Federally Owned Properties

To Whom It May Concern:

This letter shall certify that the City of Albuquerque zoning regulations are not applicable for properties owned by U.S. Federal Government, U.S. Federal Government entities, and properties within Kirtland Air Force Base.

If you have any questions regarding this matter, please feel free to contact Code Enforcement by email at codeenforcement@cabq.gov

Sincerely,

Angelo Metzgar
Code Compliance Manager
Planning Department
City of Albuquerque

Attachment A-5

Compliance History Disclosure Form

City of Albuquerque
Environmental Health Department
Air Quality Program

Air Quality
Compliance History Disclosure Form

The Albuquerque-Bernalillo County Joint Air Quality Program ("Program") administers and enforces local air quality laws for the City of Albuquerque ("City") and Bernalillo County ("County") on behalf of the City Environmental Health Department, including the New Mexico Air Quality Control Act ("AQCA"), NMSA 1978, Sections 74-2-1 to -17. In accordance with Sections 74-2-7(P) and (S) of the AQCA, the Program may deny any permit application or revoke any permit issued pursuant to the AQCA if, within ten years immediately preceding the date of submission of the permit application, the applicant or permittee meets any one of the criteria outlined in the AQCA. The Program requires applicants to file this Compliance History Disclosure Form in order for the Program to deem an air permit application administratively complete, or issue an air permit for those permits without an initial administrative completeness determination process. Additionally, an existing permit holder (permits issued prior to the Effective Date of this Form) shall provide this Compliance History Disclosure Form to the Program upon the Program's request. Note: Program Staff can answer basic questions about this Compliance History Disclosure Form but cannot provide specific guidance or legal advice.

Instructions

1. Applications filed pursuant to the following regulations shall include this Compliance History Disclosure Form, in accordance with Section 74-2-7(S) of the AQCA: *Construction Permits* (20.11.41 NMAC); *Operating Permits* (20.11.42 NMAC); *Nonattainment Areas* (20.11.60 NMAC); *Prevention of Significant Deterioration* (20.11.61 NMAC); *Acid Rain* (20.11.62 NMAC); and *Fugitive Dust* (20.11.20 NMAC) except this Form shall not be required for asbestos notifications under 20.11.20.22 NMAC.
2. This Compliance History Disclosure Form is not site specific: responses shall be based on the applicant/permittee as an entity and not be limited to the application, site, facility or source.
3. The permittee identified on this Compliance History Disclosure Form shall match the permittee in the existing permit or new application. If the information in an existing permit needs to be changed, please contact the Program about revisions and ownership transfers.
4. Answer every question completely and truthfully, and do not leave any blank spaces. If there is nothing to disclose in answer to a particular question, check the box labeled "No" except for Question 5b. Failure to provide any of the information requested in this Compliance History Disclosure Form may constitute grounds for an incompleteness determination, application denial, or permit revocation.
5. Be especially careful not to leave out information in a way that might create an impression that you are trying to hide it. Omitting information, even unintentionally, may result in application denial or permit revocation.
6. For any required explanations, be sure to identify the question to which the explanation is responsive. If you submit any document in connection with your answer to any question, refer to it as, "Exhibit No.__", and attach it after the explanation(s) at the end of the Compliance History Disclosure Form, consecutively numbering each additional page at the top right corner.
7. The Program may require additional information to make a thorough review of an application. At all times before the Program has made a final decision regarding the application, an applicant has a duty to promptly supplement and correct information the applicant has submitted in an application to the Program. The applicant's duty to supplement and correct the application includes, but is not limited to, relevant information acquired after the applicant has submitted the application and additional information the applicant otherwise determines is relevant to the application and the Program's review and decision. While the Program is processing an application, regardless of whether the Program has determined the application is administratively complete, if the Program determines that additional information is necessary to evaluate or make a final decision regarding the application, the Program may request additional information and the applicant shall provide the requested additional information.
8. Supplementary information required by the Program may include responses to public comment received by the Program during the application review process.
9. Any fees submitted for processing an application that has been denied will not be refunded. If the Program denies an application, a person may submit a new application and the fee required for a new application. The applicant has the burden of demonstrating that a permit should be issued.

COMPLIANCE HISTORY		
A. Applicant/Permittee Name: Kirtland Air Force Base		*Check Applicable Box*: ☒ Applicant ☒ Permittee
B. Time Period of Compliance Reporting (10 Years): May 1, 2016 to May 1, 2026 *Instructions: For applicants, answer the following questions with information from within the 10 years preceding the current application. For existing permit holders requested to submit this form by the Program outside of an application, answer the following questions with information from within the 10 years preceding the Program's issuance of each permit.*		
C. Questions		
1	Knowingly misrepresented a material fact in an application for a permit?	☐ Yes ☒ No
2	Refused to disclose information required by the provisions of the New Mexico Air Quality Control Act?	☐ Yes ☒ No
3	Been convicted in any court of any state or the United States of a felony related to environmental crime?	☐ Yes ☒ No
4	Been convicted in any court of any state or the United States of a crime defined by state or federal statute as involving or being in restraint of trade, price fixing, bribery, or fraud?	☐ Yes ☒ No
5a	Constructed or operated any facility for which a permit was sought, including the current application, without the required air quality permit(s) under 20.11.41 NMAC, 20.11.42 NMAC, 20.11.60 NMAC, 20.11.61 NMAC, or 20.11.62 NMAC?	☒ Yes ☐ No
5b	If "No" to question 5a, mark N/A and go to question 6. If "Yes" to question 5a, state whether each facility that was constructed or operated without the required air quality permit met at least one of the following exceptions: i. The unpermitted facility was discovered after acquisition during a timely environmental audit that was authorized by the Program or the New Mexico Environment Department; or ii. The operator of the facility, using good engineering practices and established approved calculation methodologies, estimated that the facility's emissions would not require an air permit, **and** the operator applied for an air permit within 30 calendar days of discovering that an air permit was required for the facility.	☐ Yes ☒ No ☐ N/A
6	Had any permit revoked or permanently suspended for cause under the environmental laws of any state or the United States?	☐ Yes ☒ No
7	For each "yes" answer, or "no" to 5b, please attach an explanation and supporting documentation.	

I, the undersigned, hereby certify under penalty of law that this Compliance History Disclosure Form (Form) and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I have knowledge of the information in this Form and it is, to the best of my knowledge and belief, true, accurate, and complete. I understand that there are significant penalties for submitting false information, including denial of the application or revocation of a permit, as well as fines and imprisonment for knowing violations. If I filed an application, I covenant and agree to promptly supplement and correct information in this Form until the Program makes a final decision regarding the application. Further, I certify that I am qualified and authorized to file this Form, to certify to the truth and accuracy of the information herein, and bind the permittee and source.

Signed on

JUSTIN D. SECREST, Colonel, USAF
Print Name

Signature

Commander, 377th Air Base Wing
Print Title

Kirtland Air Force Base
Company Name

Kirtland Air Force Base
Attachment A – Compliance History Form

Deviation Start Date	Deviation End date	Cause of Deviation	Correction Action Taken
14 Oct 2022	22 Mar 2023	A 20.11.41 NMAC Construction Permit was not obtained for one diesel-fired emergency. generator at Kirtland Air Force Base (KAFB). The generator was identified as a 10-kW diesel-fired emergency generator located at 377th Medical Group and was used infrequently to provide back-up power to the Dental Clinic. The generator installation date is unknown. On 16 February 2023, KAFB received a Post-Inspection Notification (PIN) over the alleged violation. The PIN required the unit to be either permitted or decommissioned.	KAFB self-reported the discovery of the emergency generator to AEHD on 20 December 2022. The signed PIN was submitted to AEHD via email on 1 March 2023. On 28 April 2023, KAFB received documentation from 377th Medical Group indicating that the generator was decommissioned and abandoned in place on 22 March 2023. KAFB notified AEHD via email on the status of the decommissioned unit on 23 May 2023.
Prior to 1994	8 Oct 2021	Construction Permit #1759 did not include an existing fuel storage tank. The fuel storage tank was identified during communications between KAFB Environmental Management and Starfire Optical Range (SOR), who operates the facility where the fuel storage tank is located. The unit was identified as one, 250-gallon above ground storage tank containing gasoline with an associated single nozzle fuel dispenser. The fuel storage tank is no longer in use and has been emptied and cleaned. The fuel tank was installed prior to 1994 but the actual date is unknown.	KAFB self-reported the discovery of this tank to AEHD on 29 July 2022 as part of the Annual Compliance Certification. The tank was inspected by Liquid Fuels Management and was deemed out-of-service on 8 October 2021.
7 Feb 2020	23 Jun 2021	A 20.11.41 NMAC Construction Permit was not obtained for one diesel fired generator at KAFB. The generator was identified during communications between the KAFB Civil Engineering Power Production shop and the National Assessment Group who operates the facility where the generator is located. The unit was identified as a 60-kW generator with 80.9 horsepower (hp) engine located at Manzano Complex, a remote and secure area. At the time of discovery, the generator was not in use, and the battery and electrical panel were not installed. It was estimated that the generator was installed in 2001 but had not been operated for at least the last four years. The National Assessment Group determined that the generator was not needed for continued operations.	KAFB self-reported the discovery of this generator to AEHD on 28 July 2021 as a part of the Annual Compliance Certification. KAFB and the National Assessment Group coordinated with the Defense Logistics Agency (DLA) to remove and dispose of the generator. The generator was transferred to the DLA disposal facility holding yard on 23 June 2021.
2006	Jul 2019	A 20.11.41 NMAC Construction Permit was not obtained for one diesel fired non-emergency generator at KAFB. The generator was identified during a base wide inventory conducted specifically to identify any nonpermitted emission units as specified in a letter submitted to AEHD by KAFB on 31 January 2017. The 71 kW generator with 95.2 hp engine was located in a remote training area	On 28 December 2017, KAFB self-reported the discovery of the generator to AEHD. KAFB submitted a construction permit application on 10 January 2019. AEHD issued Construction Permit #3366 on 22 July 2019. The generator was decommissioned and

Deviation Start Date	Deviation End date	Cause of Deviation	Correction Action Taken
		known as Bivouac Area 3. It was used to simulate a remote environment for training purposes. It was estimated that the generator was installed in early 2006. Onsite usage records and discussion with facility managers confirmed that the generator operated five to six times per year for three to four hours for training purposes.	removed from KAFB on 2 and 5 February 2022, respectively. Construction Permit #3366 was cancelled 31 October 2023.
1993	12 Dec 2016	A 20.11.41 NMAC Construction Permit was not obtained for two natural gas generators at KAFB. The two natural gas generators were identified by an Air Force Research Laboratory (AFRL) Unit Environmental Coordinator after being contacted by the building tenants. The two 100kW generators with 168 horsepower (hp) engines had provided emergency back-up power to AFRL buildings 30134 and 30136 and were installed in 1993. Onsite usage records confirmed that the generators had operated as emergency engines through 2016.	On 16 December 2016, KAFB self-reported the discovery of the two generators to AEHD. On 12 December 2016 KAFB met with the current tenant of buildings 30134 and 30136 to determine if the generators were still in use and connected to natural gas. After inspecting the generators and interviewing the tenant it was determined that the generators were still operational but not necessary for current operations. On 12 December 2016, Power Production shut down the generators, disconnected them from the natural gas lines, and disconnected the battery packs.

Kirtland Air Force Base
Attachment A – Compliance History Form

Deviation Start Date	Deviation End date	Cause of Deviation	Correction Action Taken
14 Oct 2022	22 Mar 2023	A 20.11.41 NMAC Construction Permit was not obtained for one diesel-fired emergency. generator at Kirtland Air Force Base (KAFB). The generator was identified as a 10-kW diesel-fired emergency generator located at 377th Medical Group and was used infrequently to provide back-up power to the Dental Clinic. The generator installation date is unknown. On 16 February 2023, KAFB received a Post-Inspection Notification (PIN) over the alleged violation. The PIN required the unit to be either permitted or decommissioned.	KAFB self-reported the discovery of the emergency generator to AEHD on 20 December 2022. The signed PIN was submitted to AEHD via email on 1 March 2023. On 28 April 2023, KAFB received documentation from 377th Medical Group indicating that the generator was decommissioned and abandoned in place on 22 March 2023. KAFB notified AEHD via email on the status of the decommissioned unit on 23 May 2023.
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Deviation Start Date	Deviation End date	Cause of Deviation	Correction Action Taken
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1993	12 Dec 2016	A 20.11.41 NMAC Construction Permit was not obtained for two natural gas generators at KAFB. The two natural gas generators were identified by an Air Force Research Laboratory (AFRL) Unit Environmental Coordinator after being contacted by the building tenants. The two 100kW generators with 168 horsepower (hp) engines had provided emergency back-up power to AFRL buildings 30134 and 30136 and were installed in 1993. Onsite usage records confirmed that the generators had operated as emergency engines through 2016.	On 16 December 2016, KAFB self-reported the discovery of the two generators to AEHD. On 12 December 2016 KAFB met with the current tenant of buildings 30134 and 30136 to determine if the generators were still in use and connected to natural gas. After inspecting the generators and interviewing the tenant it was determined that the generators were still operational but not necessary for current operations. On 12 December 2016, Power Production shut down the generators, disconnected them from the natural gas lines, and disconnected the battery packs.

Attachment A-6
Pre-Application Meeting Checklist and Supporting Documentation

City of Albuquerque
Environmental Health Department
Air Quality Program

Pre-Permit Application Meeting Request Form

Please complete appropriate boxes and email to aqd@cabq.gov or mail to:

Environmental Health Department
Air Quality Program
Permitting Division
P.O. Box 1293
Albuquerque, NM 87103

A copy of this form must be included as part of the application package.

Company/Organization: Current Permit #:	**Kirtland Air Force Base** **3090-RV1**	
Point of Contact: (phone number and email): Preferred form of contact (check one): ☐Phone ☒E-mail	Name: **Carina Munoz-Dyer** Phone: **505-846-8781** Email: **carina.munoz-dyer@us.af.mil**	
Preferred meeting dates/times: (provide several dates/times when applicant/consultant are available in the 1-2 weeks after submitting this form)	1st date/ time(s) **Wed 8 Apr 26.** **Anytime btwn 10am and 2:30pm**	2nd date/ time(s) **Thurs 9 Apr 26. Anytime btwn 830am and 1230pm**
Preferred meeting type (Zoom/In Person):	**In person**	
Description of Project:	KAFB would like to request an emergency permit to increase the throughput of Unit 1, Construction Permit 3090-RV1.	

City of Albuquerque
Environmental Health Department
Air Quality Program

Construction Permit (20.11.41 NMAC)
Pre-Permit Application Meeting Agenda Checklist & Public Notice Sign Guidelines Checklist

This entire document, including both completed checklists, must be included as part of the application package.

Any person seeking a new permit, a permit modification, or an emergency permit under 20.11.41 NMAC (Construction Permits) shall do so by filing a written application with the Albuquerque-Bernalillo County Joint Air Quality Program, which administers and enforces local air quality laws for the City of Albuquerque ("City") and Bernalillo County ("County"), on behalf of the City Environmental Health Department ("Department").

Prior to submitting an application, per 20.11.41.13(A) NMAC, the applicant (or their consultant) shall contact the Department in writing and submit a Pre-Permit Application Meeting Request Form to request a pre-application meeting. The Pre-Permit Application Meeting Request Form is available at https://www.cabq.gov/airquality/air-quality-permits/air-quality-application-forms. The purpose of the pre-application meeting is for the Department to provide the applicant with information regarding the contents of the application and the application process.

This pre-application meeting agenda checklist is provided to aid the Department and applicant in ensuring that in the pre-permit application meeting all information regarding the contents of the application and the application process are communicated to the applicant. This is because 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.

Also included in this document is the Public Notice Sign Guidelines Checklist, which contains requirements for how the applicant must display the required weather-proof sign.

The applicant should fill out and have this agenda checklist available at the pre-application meeting to be sure all items are covered. Check the boxes to acknowledge that each item from the agenda was discussed and that requirements for the weather-proof sign were followed.

Pre-Permit Application Meeting Agenda Checklist

Applicant Company Name: **Kirtland Air Force Base**
Facility Name: **Government Fuels Distribution**

☒ Fill out and submit a Pre-Permit Application Meeting Request form
Available online at https://www.cabq.gov/airquality/air-quality-permits/air-quality-application-forms/air-quality-application-forms

I. ☒ Discuss Project:
   a. Facility Location
   b. Facility Description
   c. Main Processes
   d. Equipment
   e. Proposed Schedule

II. ☒ Discuss the requirement for a zoning certification or verifications for new permits and permit modifications. The Zoning Requirement Cover Page form is a required component of this part of the submittal:
   a. For projects on property subject to City or County zoning laws (*i.e.*, **not** located on federal land, **not** located on State of New Mexico land, **not** located on Tribal land), a zoning certification from the appropriate planning department is required.
      i. City Planning Form: https://www.cabq.gov/planning/code-enforcement-zoning
      ii. County Planning Form: https://www.bernco.gov/planning/planning-and-land-use/applications-forms/
   b. If the project's property is not subject to City or County zoning jurisdiction, a zoning verification from both planning departments is required.
      i. City Planning Form: https://www.cabq.gov/planning/code-enforcement-zoning
      ii. County Planning Form: https://www.bernco.gov/planning/planning-and-land-use/applications-forms/
   c. The zoning certification or verifications **must** be obtained from the appropriate Planning Department, either City of Albuquerque or Bernalillo County. For more information, please visit the City's Planning Department website at https://www.cabq.gov/planning or Bernalillo County's Planning Department website at the https://www.bernco.gov/planning/.

III. ☒ Discuss the requirement for a Compliance History Disclosure Form as of Nov. 6, 2023 for permit application submittals except for Administrative Revisions that are not transfers of ownership.

IV. ☐ Discuss the potential requirement for a BACT Analysis for new permits and permit modifications per 20.11.72 NMAC.
   a. Required if new or modifying stationary source is within a one-mile radius of an overburdened area, as described in 20.11.72.8(C) NMAC; or
   b. Required if new or modifying stationary source emits any one, or combination of, the fifteen hazardous air pollutants (HAPs) listed in 20.11.72.8(D) NMAC.

V. ☒ If permit modification or revision, review current permit:
   a. Review Process Equipment Table and Emissions Table and discuss changes
   b. Request information about the replacement or new equipment (for example, if it is an engine, we need to know if it is new, what year, fuel type, etc…) to give them an idea of the changes that will be needed
   c. Discuss possible changes in permit conditions

VI. ☒ Air Dispersion modeling process, procedures and options:
   a. When modeling is required and possibility of waivers
   b. Protocol process, purpose, and time frame
   c. Preliminary review, purpose, and time frame
   d. Full review and time frame
   e. Peer reviews
   f. Assumptions in the modeling become permit conditions
   g. NED data should be used instead of DEM data for assigning elevations to receptors, sources, buildings, etc.

VII. ☐ Applicant's public notice requirements
   a. During the same month application package will be submitted, ask Department for memo of neighborhood associations/coalitions within 1 mile of facility
   b. Fill out and send Notice of Intent to Construct form as attachment, with Applicant Notice Cover Letter as email body, to neighborhood associations/coalitions listed in memo: https://www.cabq.gov/airquality/air-quality-permits/air-quality-application-forms
   c. Post and maintain a weather-proof sign. Signs are available in the downtown Program office. The Public Notice Sign Guidelines Checklist can be found on the next page of this document.

VIII. ☒ Regulatory timelines
   a. 30 days to rule application complete
   b. 90 days after ruled complete for permitting decision
   c. 30-day public comment period after application deemed complete
   d. If public interest in application:
      i. 30-day review of technical analysis
      ii. 90-day extension for permitting decision
   e. Request for Public Information Hearing - 90-day extension for permitting decision
   f. Complex technical issues in application - 90-day extension for permitting decision
   g. If application ruled incomplete it stops timeline and restarts at beginning with updated submittal

IX. ☒ Department Policies
   a. One original hard copy must be submitted along with a duplicate copy. If the original is printed double sided, then it must be printed head-to-toe (flip on the short edge). The duplicate copy should be a high-quality electronic duplicate submitted on thumb drive as one complete PDF with all application contents found in the hardcopy, including pages with signatures. However, do not include financial information, such as a copy of a check, in the electronic PDF. The electronic submittal should also include emission calculations Excel-compatible file(s) and modeling files, if applicable.
   b. Applications will be ruled incomplete if any parts from Permit Application Checklist are missing
   c. Review fees paid in full are part of the application package (Except as noted above)
   d. Discuss payment format (by check, credit card or online)
   e. Use the most recent Permit Application Checklist, found under Part 41 Implementation on this page: https://www.cabq.gov/airquality/air-quality-permits/air-quality-application-forms
   f. After three tries, permit application denied and application must start over including repayment of fees

X. ☐ Additional Questions?

City of Albuquerque
Environmental Health Department
Air Quality Program

Public Notice Sign Guidelines

Any person seeking a permit under 20.11.41 NMAC, Construction Permits, shall do so by filing a written application with the Department. *Prior to submitting an application, the applicant shall post and maintain a weather-proof sign provided by the department. The applicant shall keep the sign posted until the department takes final action on the permit application; if an applicant can establish to the department's satisfaction that the applicant is prohibited by law from posting, at either location required, the department may waive the posting requirement and may impose different notification requirements.* **A copy of this form must be submitted with your 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.

Applicant Company Name: **Kirtland Air Force Base**
Facility Name: **Government Fuels Distribution**

☐ The sign must be posted at the more visible of either the proposed or existing facility entrance (or, if approved in advance and in writing by the department, at another location on the property that is accessible to the public)

- ☐ The sign shall be installed and maintained in a condition such that members of the public can easily view, access, and read the sign at all times.
- ☐ The lower edge of the sign board should be mounted a minimum of 2 feet above the existing ground surface to facilitate ease of viewing

☐ Include at least two pictures of the completed, properly posted sign in the application package immediately following this document. One picture should show the location of the posted sign and the other should be close enough to the sign for the posted information to be legible in the picture.

☒ **Check here if the department has waived the sign posting requirement.**
Alternative public notice details: **Applicant's public notice requirements not applicable for Emergency Permit. Instead, 20.11.41.24 NMAC applies, which requires public notice to bbe issued by the Department after an Emergency Permit has been issued.**

Attachment B

Facility Map

Scale: 1:5,020

Legend

Air Emission Source

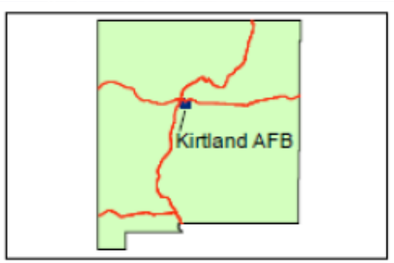
Installation Boundary

Kirtland AFB

Air Emission Sources

N

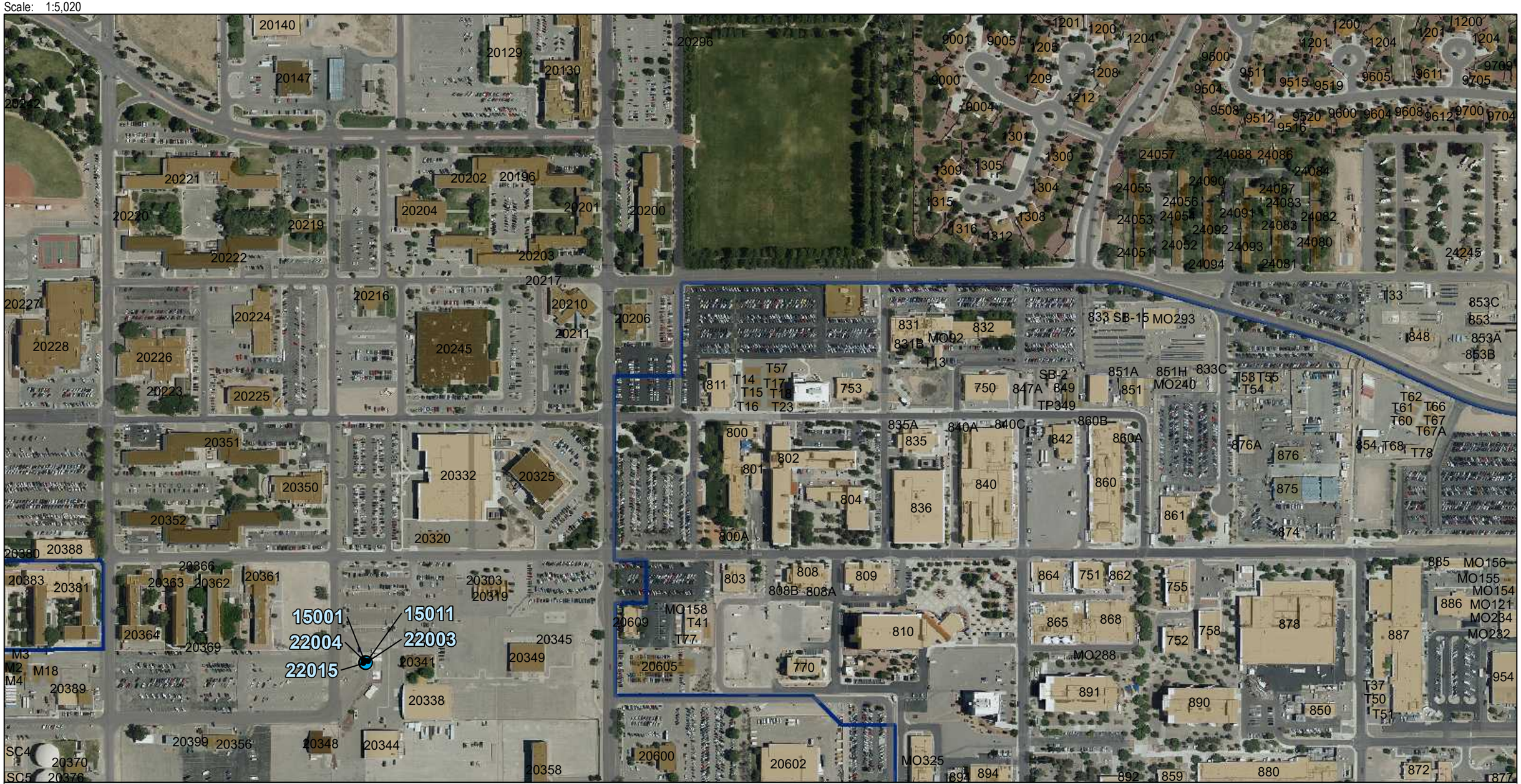
0 0.03 0.06 0.12 0.18 0.24 Miles



Cooperative Agreement Number: W9126G-14-2-0018 - W9126G- 0-2-0004

Prepared By: Aric Mccrumb, CSU-CEMML GIS Analyst, Aric.Mccrumb.ctr@us.af.mil, **Last Save Date: 1/18/2022**

Scale: 1:5,020



Legend

Air Emission Source

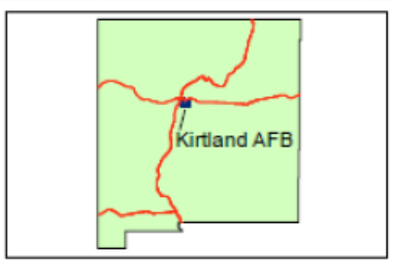
Installation Boundary

Kirtland AFB

Air Emission Sources

N

0 0.03 0.06 0.12 0.18 0.24 Miles



Cooperative Agreement Number: W9126G-14-2-0018 - W9126G- 0-2-0004

Prepared By: Aric Mccrumb, CSU-CEMML GIS Analyst, Aric.Mccrumb.ctr@us.af.mil, **Last Save Date: 1/18/2022**

Scale: 1:5,020

Legend

Air Emission Source

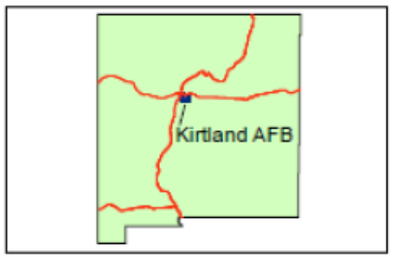
Installation Boundary

Kirtland AFB

Air Emission Sources

N

0 0.03 0.06 0.12 0.18 0.24 Miles



Cooperative Agreement Number: W9126G-14-2-0018 - W9126G- 0-2-0004

Prepared By: Aric Mccrumb, CSU-CEMML GIS Analyst, Aric.Mccrumb.ctr@us.af.mil, **Last Save Date: 1/18/2022**

Attachment C
Emissions Calculations

Kirtland Air Force Base
Permit #3090-RV1 Modification
Summary of VOC Emissions
Government Fuels Distribution Operations Equipment

Process Equipment Unit No.	Emission Source	Existing Hourly Emissions (lb/hr)[1]	Existing Controlled Emissions (tpy)[1]	Proposed Hourly Emissions (lb/hr)[2]	Proposed Controlled Emissions (tpy)[2]	Proposed Uncontrolled Emissions (tpy)[3]	Net Change in Emissions (lb/hr)	Net Change in Emissions (tpy)
1	Gasoline Storage, Main Fuels Yard, Bldg 1041, AQUIS ID 22005-2	30.70	2.31	30.56	1.78	133.85	-0.141	-0.527
	Gasoline Loading, Main Fuels Yard, Bldg 1041, AQUIS ID 16001	105.55	0.26	108.96	0.42	477.27	+3.415	+0.164
	Unit 1 Total	**136.25**	**2.57**	**139.52**	**2.21**	**611.11**	**+3.274**	**-0.364**
2	Gasoline Storage, Govt East Service Station, Bldg 20359, AQUIS ID 22003	2.76	3.78	2.76	3.78	12.09	0	0
	Gasoline Storage, Govt East Service Station, Bldg 20359, AQUIS ID 22004	2.76	2.90	2.76	2.90	12.09	0	0
	Gasoline Dispensing, Govt East Service Station, AQUIS ID 15001	28.08	4.04	28.08	4.04	122.99	0	0
	Unit 2 Total	**33.60**	**10.72**	**33.60**	**10.72**	**147.18**	0	**0**
3	E85 Storage, Govt East Service Station, Bldg 20359, AQUIS ID 22015	3.75	5.70	3.75	5.70	16.41	0	0
	E85 Dispensing, Govt East Service Station, Bldg 20359, AQUIS ID 15011	14.04	2.98	14.04	2.98	61.50	0	0
	Unit 3 Total	**17.79**	**8.68**	**17.79**	**8.69**	**77.90**	0	**0**
4	Gasoline Storage, Govt West Service Station, Bldg 471, AQUIS ID 25012	9.96	0.58	9.96	0.58	43.62	0	0
	Gasoline Dispensing, Govt West Service Station, Bldg 471, AQUIS ID 15004	14.04	0.82	14.04	0.82	61.50	0	0
	Unit 4 Total	**24.00**	**1.40**	**24.00**	**1.40**	**105.12**	0	**0**
Grand Total		**211.64**	**23.37**	**214.91**	**23.01**	**941.31**	**+3.274**	**-0.364**

[1] Existing emissions reflect currently permitted emissions from Permit #3090-RV1

[2] Reflects requested controlled emission rates listed in permit application

[3] Reflects uncontrolled emission rates listed in permit application

Kirtland Air Force Base
Permit #3090-RV1 Modification
Summary of Controlled HAP Emissions listed in application pg. 10
Government Fuels Distribution Operations Equipment

Process Equipment Unit No.	Emission Source	Total HAP Emissions		Benzene		Toluene		Ethylbenzene		Xylene		1,1,2-Trichloroethane		Chlorobenzene		Hexane		Naphthalene		O-Xylene		Cumene	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1	Gasoline Storage, Main Fuels Yard, Bldg 1041, AQUIS ID 22005-2	1.43	0.084	0.48	0.028	0.64	0.038	0.067	0.0039	0.23	0.014	0.0061	0.00036	0	0	0	0	0	0	0	0	0	0
	Gasoline Loading, Main Fuels Yard, Bldg 1041, AQUIS ID 16001	5.11	0.020	1.72	0.0067	2.30	0.0089	0.24	0.00093	0.83	0.0032	0.022	0.000085	0	0	0	0	0	0	0	0	0	0
	Unit 1 Total	**6.54**	**0.103**	**2.20**	**0.035**	**2.94**	**0.047**	**0.31**	**0.0049**	**1.06**	**0.017**	**0.028**	**0.00044**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2	Gasoline Storage, Govt East Service Station, Bldg 20359, AQUIS ID 22003	0.13	0.18	0.044	0.060	0.058	0.080	0.0061	0.0083	0.021	0.029	0.00055	0.00076	0	0	0	0	0	0	0	0	0	0
	Gasoline Storage, Govt East Service Station, Bldg 20359, AQUIS ID 22004	0.13	0.14	0.044	0.046	0.058	0.061	0.0061	0.0064	0.021	0.022	0.00055	0.00058	0	0	0	0	0	0	0	0	0	0
	Gasoline Dispensing, Govt East Service Station, AQUIS ID 15001	1.32	0.19	0.44	0.064	0.59	0.085	0.062	0.0089	0.21	0.031	0.0056	0.00081	0	0	0	0	0	0	0	0	0	0
	Unit 2 Total	**1.58**	**0.50**	**0.53**	**0.17**	**0.71**	**0.23**	**0.074**	**0.024**	**0.26**	**0.081**	**0.0067**	**0.0021**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
3	E85 Storage, Govt East Service Station, Bldg 20359, AQUIS ID 22015	0.26	0.39	0.059	0.090	0.079	0.12	0.0082	0.013	0.028	0.043	0.00075	0.0011	0.00075	0.0011	0.070	0.11	0.00037	0.00057	0.012	0.018	0.00037	0.00057
	E85 Dispensing, Govt East Service Station, Bldg 20359, AQUIS ID 15011	0.97	0.21	0.22	0.047	0.30	0.063	0.031	0.0066	0.11	0.023	0.0028	0.00060	0.0028	0.00060	0.26	0.055	0.0014	0.00030	0.044	0.0092	0.0014	0.00030
	Unit 3 Total	**1.23**	**0.60**	**0.28**	**0.14**	**0.38**	**0.18**	**0.039**	**0.019**	**0.14**	**0.066**	**0.0036**	**0.0017**	**0.0036**	**0.0017**	**0.33**	**0.16**	**0.0018**	**0.00087**	**0.055**	**0.027**	**0.0018**	**0.00087**
4	Gasoline Storage, Govt West Service Station, Bldg 471, AQUIS ID 25012	0.47	0.027	0.16	0.0092	0.21	0.012	0.022	0.0013	0.076	0.0044	0.0020	0.00012	0	0	0	0	0	0	0	0	0	0
	Gasoline Dispensing, Govt West Service Station, Bldg 471, AQUIS ID 15004	0.66	0.038	0.22	0.013	0.30	0.017	0.031	0.0018	0.11	0.0062	0.0028	0.00016	0	0	0	0	0	0	0	0	0	0
	Unit 4 Total	**1.13**	**0.066**	**0.38**	**0.022**	**0.51**	**0.030**	**0.053**	**0.0031**	**0.18**	**0.011**	**0.0048**	**0.00028**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grand Total		**10.47**	**1.27**	**3.40**	**0.36**	**4.53**	**0.49**	**0.47**	**0.051**	**1.63**	**0.17**	**0.043**	**0.0046**	**0.0036**	**0.0017**	**0.33**	**0.16**	**0.0018**	**0.00087**	**0.055**	**0.027**	**0.0018**	**0.00087**

Kirtland Air Force Base - Gasoline Storage at Building 1041 Main Fuels Yard
Unit 1 AQUIS ID 22005-2

EPA TANKS v.409d (via APIMS) Emission Methodology for Volatile Organic Compounds (VOC)
VOC Emissions from Gasoline Storage

Parameters	Value	UOM
Unloading Rate	300	gal/min
Potentual Annual Throughput[1]	157,680,000	gal/yr
Annual Throughput[2]	140,000	gal/yr

Emission Type[3]	Annual Emissions (ton/yr)[4]	Potential to Emit (ton/yr)[5]	Hourly Emissions (lb/hr)[6]
Working Losses	0.70	132.77	30.31
Breathing Losses	1.08	1.08	0.25
Total Losses	**1.78**	**133.85**	**30.56**

[1] Potential annual throughput was calculated based on the number of hours in a year (8760 hours per year)
The following equation was used to calculate potential annual throughput:
Potential Annual Throughput (gal/yr) = Unloading Rate (gal/min) * 60 (min/hr) * 8760 (hrs/yr)

[2] Annual requested throughput

[3] Working Losses, Breathing Losses, and Total Losses were calculated using EPA TANKS v.409d (via APIMS)
See supporting documentation

[4] Calculated in EPA TANKS v.409d (via APIMS) using the annual throughput.

[5] Calculated in EPA TANKS v.409d (via APIMS) using the potential annual throughput.

[6] Hourly emissions are back-calculated from PTE using the following equation:
Hourly Emissions (lbs/hr) = PTE (ton/yr) * 2000 (lb/ton) / 8760 (hrs/yr)

Kirtland Air Force Base - Gasoline Storage at Building 1041 Main Fuels Yard
Unit 1 AQUIS ID 22005-2

RVP-13 Speciation Fractions for Hazardous Air Pollutants (HAP)[7]

Compound	Vapor Weight (%)
Benzene	1.58%
Toluene	2.11%
Ethylbenzene	0.22%
Xylene	0.76%
1,1,2-Trichloroethane	0.02%

VOC Emissions with Speciated HAP Breakdown
Unit 1 AQUIS ID 22005-2

Pollutant	Annual Emissions (ton/yr)[8]	Potential to Emit (tons/yr)[8]	Hourly Emissions (lb/hr)[9]
Total VOC Emissions	1.78	133.85	30.56
Total HAP Emissions	0.084	6.28	1.43
Benzene	0.028	2.11	0.48
Toluene	0.038	2.82	0.64
Ethylbenzene	0.0039	0.29	0.067
Xylene	0.014	1.02	0.23
1,1,2-Trichloroethane	0.00036	0.027	0.0061

[7] Individual HAP emissions for gasoline sources were estimated by applying fuel-specific speciation consistent with EPA TANKS v.409d (via APIMS). Individual HAP emissions are presented as speciated components of total VOC emissions.

[8] Speciated HAP emissions (ton/yr) = VOC emissions (ton/yr) * (HAP vapor weight %/100)

[9] Speciated HAP emissions (lb/hr) = VOC emissions (lb/hr) * (HAP vapor weight %/100)

Kirtland Air Force Base - Gasoline Storage at Building 1041 Main Fuels Yard
Unit 1 AQUIS ID 16001

VOC Emissions from Gasoline Loading

Parameters	Value	UOM
Loading Rate	300	gal/min
Vapor Molecular Weight of Gasoline RVP 13[1]	62	lb/lb-mole
Bulk Liquid Temperature[2]	517.60	R
True Vapor Pressure[3]	6.76	psia
Saturation Factor[4]	0.60	-
Capture Efficiency[5]	0	%
Control Efficiency[5]	0	%
Annual Throughput[6]	140,000	gal/yr

Loading Loss (lb/1,000-gal)[7]	Hourly Emissions (lb/hr)[8]	Annual Emissions (ton/yr)[9]	Potential to Emit (ton/yr)[10]
6.05	108.96	0.42	477.27

[1] Vapor molecular weight from AP-42 Section 7.1: Organic Liquid Storage Tanks, Table 7.1-2 (September 2025).

[2] Temperature in °F was obtained based on atmospheric calculations in EPA TANKS v.409d (via APIMS)
See supporting documentation for Unit 1 AQUIS ID 22005-2
The following equation, from AP-42 Section 5.2: Transportation and Marketing of Petroleum Liquids
(June 2008), was used to calculate bulk liquid temperature:
T(°R) = °F + 460

[3] True Vapor Pressure was obtained based on vapor pressure daily average calculated in EPA TANKS v.409d (via APIMS)
See supporting documentation for Unit 1 AQUIS ID 22005-2

[4] Saturation Factor (S Factor) from AP-42 Section 5.2: Transportation and Marketing of Petroleum Liquids, Table 5.2-1 (June 2008).

[5] No vapor recovery control system is used during loading.

[6] Annual requested throughput

[7] Loading loss calculation methodology from AP-42 Section 5.2: Transportation and Marketing of Petroleum Liquids (June 2008).
The following equation was used to calculate loading losses:
Loading Loss (lbs/1000-gal) = 12.46 * [(SPM) / T] * [1 - (Capeff/100 * Coneff/100)]
where: S = a saturation factor obtained from Table 5.2-1
P = true vapor pressure of liquid loaded (psia)
M = vapor molecular weight (lb/lb-mole)
T = Bulk Liquid Temperature (°R)
Capeff = Capture Efficiency (%)
Coneff = Control Efficiency (%)

[8] The following equation was used to calculate hourly emissions:
Hourly Emissions (lb/hr) = Loading Loss (lb/1000-gal) * Loading Rate (gal/min) * 60 (min/hr) / 1000

[9] The following equation was used to calculate annual emissions:
Annual emissions (ton/yr) = Annual Throughput (1000-gal/yr) * Loading Loss (lb/1000-gal) / 2000 (lb/ton)

[10] Potential to emit (PTE) was calculated based on the number of hours in a year (8760 hours per year)
The following equation was used to calculate PTE:
PTE (ton/yr) = Hourly emissions (lb/hr) * 8760 (hr/yr) / 2000 (lb/ton)

Kirtland Air Force Base - Gasoline Storage at Building 1041 Main Fuels Yard
Unit 1 AQUIS ID 16001

RVP-13 Speciation Fractions for Hazardous Air Pollutants (HAP)[11]

Compound	Vapor Weight (%)
Benzene	1.58%
Toluene	2.11%
Ethylbenzene	0.22%
Xylene	0.76%
1,1,2-Trichloroethane	0.02%

VOC Emissions with Speciated HAP Breakdown
Unit 1 AQUIS ID 16001

Pollutant	Annual Emissions (ton/yr)[12]	Potential to Emit (tons/yr)[12]	Hourly Emissions (lb/hr)[13]
Total VOC Emissions	0.42	477.27	108.96
Total HAP Emissions	0.020	22.38	5.11
Benzene	0.0067	7.54	1.72
Toluene	0.0089	10.070	2.30
Ethylbenzene	0.00093	1.050	0.24
Xylene	0.0032	3.63	0.83
1,1,2-Trichloroethane	0.000085	0.095	0.022

[11] Individual HAP emissions for gasoline sources were estimated by speciating total VOC emissions using representative RVP-13 gasoline vapor-phase weight percent values consistent with AP-42 methodologies. Individual HAP emissions are presented as speciated components of total VOC emissions.

[12] Speciated HAP emissions (ton/yr) = VOC emissions (ton/yr) * (HAP vapor weight %/100)

[13] Speciated HAP emissions (lb/hr) = VOC emissions (lb/hr) * (HAP vapor weight %/100)

Kirtland Air Force Base - Gasoline Storage at Building 20359 Government East Service Station
Unit 2 AQUIS IDs 22003 and 22004

VOC Emissions from Gasoline Storage

Parameters	Value	UOM
Unloading Rate	20	gal/min
Potentual Annual Throughput[1]	10,512,000	gal/yr
AQUIS ID 22003 Annual Throughput[2]	510,000	gal/yr
AQUIS ID 22004 Annual Throughput[2]	210,000	gal/yr

Emission Type[3]	Annual Emissions[4] (ton/yr)	Potential to Emit VOC[5] (ton/yr)	Hourly Emissions[6] (lb/hr)
Working Losses 22003	1.92	10.24	2.34
Breathing Losses 22003	1.86	1.86	0.42
Total Losses 22003	**3.78**	**12.09**	**2.76**
Working Losses 22004	1.05	10.24	2.34
Breathing Losses 22004	1.86	1.86	0.42
Total Losses 22004	**2.90**	**12.09**	**2.76**

[1] Potential annual throughput was calculated based on the number of hours in a year (8760 hours per year)
The following equation was used to calculate potential annual throughput:
Potential Annual Throughput (gal/yr) = Unloading Rate (gal/min) * 60 (min/hr) * 8760 (hrs/yr)

[2] Annual requested throughput

[3] Working Losses, Breathing Losses, and Total Losses were calculated using EPA TANKS v.409d (via APIMS) submitted with prior permit application analysis
See supporting documentation

[4] Calculated in EPA TANKS v.409d (via APIMS) using the annual throughput.

[5] Calculated in EPA TANKS v.409d (via APIMS) using the potential annual throughput.

[6] Hourly emissions are back-calculated from PTE using the following equation:
Hourly Emissions (lbs/hr) = PTE (ton/yr) * 2000 (lb/ton) / 8760 (hrs/yr)

Kirtland Air Force Base - Gasoline Storage at Building 20359 Government East Service Station
Unit 2 AQUIS IDs 22003 and 22004

RVP-13 Speciation Fractions for Hazardous Air Pollutants (HAP)[7]

Compound	Vapor Weight (%)
Benzene	1.58%
Toluene	2.11%
Ethylbenzene	0.22%
Xylene	0.76%
1,1,2-Trichloroethane	0.02%

VOC Emissions with Speciated HAP Breakdown
Unit 2 AQUIS IDs 22003 and 22004

Pollutant	AQUIS ID 22003			AQUIS ID 22004		
	Annual Emissions (ton/yr)[8]	Potential to Emit (tons/yr)[8]	Hourly Emissions (lb/hr)[9]	Annual Emissions (ton/yr)[8]	Potential to Emit (tons/yr)[8]	Hourly Emissions (lb/hr)[9]
Total VOC Emissions	3.78	12.09	2.76	2.90	12.09	2.76
Total HAP Emissions	0.18	0.57	0.13	0.14	0.57	0.13
Benzene	0.060	0.19	0.044	0.046	0.19	0.044
Toluene	0.080	0.26	0.058	0.061	0.26	0.058
Ethylbenzene	0.0083	0.027	0.0061	0.0064	0.027	0.0061
Xylene	0.029	0.092	0.021	0.022	0.092	0.021
1,1,2-Trichloroethane	0.00076	0.0024	0.00055	0.00058	0.0024	0.00055

[7] Individual HAP emissions for gasoline sources were estimated by applying fuel-specific speciation consistent with EPA TANKS v.409d (via APIMS). Individual HAP emissions are presented as speciated components of total VOC emissions.

[8] Speciated HAP emissions (ton/yr) = VOC emissions (ton/yr) * (HAP vapor weight %/100)

[9] Speciated HAP emissions (lb/hr) = VOC emissions (lb/hr) * (HAP vapor weight %/100)

Kirtland Air Force Base - Gasoline Storage at Building 20359 Government East Service Station Unit 2 AQUIS ID 15001

VOC Emissions from Gasoline Dispensing

Parameters	Value	UOM
Nozzle Dispensing Rate[1]	40	gal/min
Annual Throughput[2]	690,000	gal/yr

Loss Category	VOC Emission Factor[3] (lb/1,000-gal)	Hourly Emissions[4] (lb/hr)	Annual Emissions[5] (ton/yr)	Potential to Emit VOC[6] (ton/yr)
Displacement Losses from Vehicle Fueling[7]	11.00	26.40	3.80	115.63
Spillage during Vehicle Fueling	0.70	1.68	0.24	7.36
Total Loss from Vehicle Fueling	**11.70**	**28.08**	**4.04**	**122.99**

[1] Nozzle dispensing rate based on four standard gas station pump nozzles, two nozzles per AST, that can all be operated simultaneously at a rate of 10 gal/min.

[2] Annual requested throughput

[3] Emission factors (EF) are from AP-42 Section 5.2: Transportation and Marketing of Petroleum Liquids, Table 5.2-7 (June 2008).

[4] The following equation was used to calculate hourly emissions:
Hourly Emissions (lb/hr) = VOC Emission Factor (lb/1000-gal) * Nozzle Dispensing Rate (gal/min) * 60 (min/hr) / 1000

[5] The following equation was used to calculate annual emissions:
Annual emissions (ton/yr) = Annual Throughput (1000-gal/yr) * VOC Emission Factor (lb/1000-gal) / 2000 (lb/ton)

[6] Potential to emit (PTE) was calculated based on the number of hours in a year (8760 hours per year)
The following equation was used to calculate PTE:
PTE (ton/yr) = Hourly emissions (lb/hr) * 8760 (hr/yr) / 2000 (lb/ton)

[7] EF for Displacement Losses is for uncontrolled losses

Kirtland Air Force Base - Gasoline Storage at Building 20359 Government East Service Station Unit 2 AQUIS ID 15001

RVP-13 Speciation Fractions for Hazardous Air Pollutants (HAP)[8]

Compound	Vapor Weight (%)
Benzene	1.58%
Toluene	2.11%
Ethylbenzene	0.22%
Xylene	0.76%
1,1,2-Trichloroethane	0.02%

VOC Emissions with Speciated HAP Breakdown
Unit 2 AQUIS ID 15001

Pollutant	Annual Emissions (ton/yr)[9]	Potential to Emit (tons/yr)[9]	Hourly Emissions (lb/hr)[10]
Total VOC Emissions	4.04	122.99	28.08
Total HAP Emissions	0.189	5.77	1.32
Benzene	0.064	1.94	0.44
Toluene	0.085	2.60	0.59
Ethylbenzene	0.0089	0.27	0.062
Xylene	0.031	0.93	0.21
1,1,2-Trichloroethane	0.00081	0.025	0.0056

[8] Individual HAP emissions for gasoline sources were estimated by speciating total VOC emissions using representative RVP-13 gasoline vapor-phase weight percent values consistent with AP-42 methodologies. Individual HAP emissions are presented as speciated components of total VOC emissions.

[9] Speciated HAP emissions (ton/yr) = VOC emissions (ton/yr) * (HAP vapor weight %/100)

[10] Speciated HAP emissions (lb/hr) = VOC emissions (lb/hr) * (HAP vapor weight %/100)

Kirtland Air Force Base - E85 Storage at Building 20359 Government East Service Station
Unit 3 AQUIS ID 22015

VOC Emissions from E85 Storage

Parameters	Value	UOM
Unloading Rate	20	gal/min
Potentual Annual Throughput[1]	10,512,000	gal/yr
AQUIS ID 22015 Annual Throughput2	510,000	gal/yr

Emission Type[3]	Annual Emissions[4] (ton/yr)	Potential to Emit VOC[5] (ton/yr)	Hourly Emissions[6] (lb/hr)
Working Losses	2.47	13.18	3.01
Breathing Losses	3.23	3.23	0.74
Total Losses	**5.70**	**16.41**	**3.75**

[1] Potential annual throughput was calculated based on the number of hours in a year (8760 hours per year)
The following equation was used to calculate potential annual throughput:
Potential Annual Throughput (gal/yr) = Unloading Rate (gal/min) * 60 (min/hr) * 8760 (hrs/yr)

[2] Annual requested throughput

[3] Working Losses, Breathing Losses, and Total Losses were calculated using EPA TANKS v.409d (via APIMS) submitted with prior permit application analysis See supporting documentation

[4] Calculated in EPA TANKS v.409d (via APIMS) using the annual throughput.

[5] Calculated in EPA TANKS v.409d (via APIMS) using the potential annual throughput.

[6] Hourly emissions are back-calculated from PTE using the following equation:
Hourly Emissions (lbs/hr) = PTE (ton/yr) * 2000 (lb/ton) / 8760 (hrs/yr)

Kirtland Air Force Base - E85 Storage at Building 20359 Government East Service Station
Unit 3 AQUIS ID 22015

E85 Basis Speciation Fractions for Hazardous Air Pollutants (HAP)[7]

Compound	Vapor Weight (%)
Benzene	1.58%
Toluene	2.11%
Ethylbenzene	0.22%
Xylene	0.76%
1,1,2-Trichloroethane	0.02%
Chlorobenzene	0.02%
Hexane	1.86%
Naphthalene	0.01%
O-Xylene	0.31%
Cumene	0.01%

VOC Emissions with Speciated HAP Breakdown
Unit 3 AQUIS ID 22015

Pollutant	Annual Emissions (ton/yr)[8]	Potential to Emit (tons/yr)[8]	Hourly Emissions (lb/hr)[9]
Total VOC Emissions	5.70	16.41	3.75
Total HAP Emissions	0.39	1.13	0.26
Benzene	0.090	0.26	0.059
Toluene	0.12	0.35	0.079
Ethylbenzene	0.013	0.036	0.008
Xylene	0.043	0.12	0.028
1,1,2-Trichloroethane	0.0011	0.0033	0.00075
Chlorobenzene	0.0011	0.0033	0.00075
Hexane	0.11	0.31	0.070
Naphthalene	0.00057	0.0016	0.00037
O-Xylene	0.018	0.051	0.012
Cumene	0.0006	0.0016	0.00037

[7] Individual HAP emissions for E85 sources were estimated by applying fuel-specific speciation consistent with EPA TANKS v.409d (via APIMS). A surrogate for RVP-13 was utilized for E85 since there is no default fuel speciation profile available. Additional constituents included to conservatively represent the fuel blend. Individual HAP emissions are presented as speciated components of total VOC emissions.

[8] Speciated HAP emissions (ton/yr) = VOC emissions (ton/yr) * (HAP vapor weight %/100)

[9] Speciated HAP emissions (lb/hr) = VOC emissions (lb/hr) * (HAP vapor weight %/100)

Kirtland Air Force Base - E85 Dispensing at Building 20359 Government East Service Station Unit 3 AQUIS ID 15011

VOC Emissions from E85 Dispensing

Parameters	Value	UOM
Nozzle Dispensing Rate[1]	20	gal/min
Annual Throughput[2]	510,000	gal/yr

Loss Category	VOC Emission Factor[3] (lb/1,000-gal)	Hourly Emissions[4] (lb/hr)	Annual Emissions[5] (ton/yr)	Potential to Emit VOC[6] (ton/yr)
Displacement Losses from Vehicle Fueling[7]	11.00	13.20	2.81	57.82
Spillage during Vehicle Fueling	0.70	0.84	0.18	3.68
Total Loss from Vehicle Fueling	**11.70**	**14.04**	**2.98**	**61.50**

[1] Nozzle dispensing rate based on two standard service station pump nozzles that can be operated simultaneously at a rate of 10 gal/min.

[2] Annual requested throughput

[3] Emission factors (EF) are from AP-42 Section 5.2: Transportation and Marketing of Petroleum Liquids, Table 5.2-7 (June 2008).

[4] The following equation was used to calculate hourly emissions:
Hourly Emissions (lb/hr) = VOC Emission Factor (lb/1000-gal) * Nozzle Dispensing Rate (gal/min) * 60 (min/hr) / 1000

[5] The following equation was used to calculate annual emissions:
Annual emissions (ton/yr) = Annual Throughput (1000-gal/yr) * VOC Emission Factor (lb/1000-gal) / 2000 (lb/ton)

[6] Potential to emit (PTE) was calculated based on the number of hours in a year (8760 hours per year)
The following equation was used to calculate PTE:
PTE (ton/yr) = Hourly emissions (lb/hr) * 8760 (hr/yr) / 2000 (lb/ton)

[7] EF for Displacement Losses is for uncontrolled losses

Kirtland Air Force Base - E85 Dispensing at Building 20359 Government East Service Station Unit 3 AQUIS ID 15011

E85 Basis Speciation Fractions for Hazardous Air Pollutants (HAP)[8]

Compound	Vapor Weight (%)
Benzene	1.58%
Toluene	2.11%
Ethylbenzene	0.22%
Xylene	0.76%
1,1,2-Trichloroethane	0.02%
Chlorobenzene	0.02%
Hexane	1.86%
Naphthalene	0.01%
O-Xylene	0.31%
Cumene	0.01%

VOC Emissions with Speciated HAP Breakdown
Unit 3 AQUIS ID 15011

Pollutant	Annual Emissions (ton/yr)[9]	Potential to Emit (tons/yr)[9]	Hourly Emissions (lb/hr)[10]
Total VOC Emissions	2.98	61.50	14.04
Total HAP Emissions	0.21	4.24	0.97
Benzene	0.047	0.97	0.22
Toluene	0.063	1.30	0.30
Ethylbenzene	0.0066	0.14	0.031
Xylene	0.023	0.47	0.11
1,1,2-Trichloroethane	0.00060	0.012	0.0028
Chlorobenzene	0.00060	0.012	0.0028
Hexane	0.055	1.14	0.26
Naphthalene	0.00030	0.006	0.0014
O-Xylene	0.0092	0.19	0.044
Cumene	0.00030	0.0061	0.0014

[8] Individual HAP emissions were estimated by speciating total VOC emissions using RVP-13 as a surrogate for E85 since there is no default E85 fuel speciation profile available. Additional constituents included to conservatively represent the fuel blend. Individual HAP emissions are presented as speciated components of total VOC emissions.

[9] Speciated HAP emissions (ton/yr) = VOC emissions (ton/yr) * (HAP vapor weight %/100)

[10] Speciated HAP emissions (lb/hr) = VOC emissions (lb/hr) * (HAP vapor weight %/100)

Kirtland Air Force Base - Gasoline Storage at Building 471 Government West Service Station
Unit 4 AQUIS IDs 15004 and 25012

VOC Emissions from Gasoline Dispensing

Parameters	Value	UOM
Nozzle Dispensing Rate	20	gal/min
Annual Throughput	140,000	gal/yr

AQUIS ID	Loss Category	VOC Emission Factor[3] (lb/1,000-gal)	Hourly Emissions[4] (lb/hr)	Annual Emissions[5] (ton/yr)	Potential to Emit VOC[6] (ton/yr)
25012	UST Filling[7]	7.30	8.76	0.51	38.37
	UST Breathing & Emptying	1.00	1.20	0.07	5.26
	Total Loss	**8.30**	**9.96**	**0.58**	**43.62**
15004	Displacement Losses from Vehicle Fueling[8]	11.00	13.20	0.77	57.82
	Spillage during Vehicle Fueling	0.70	0.84	0.05	3.68
	Total Loss from Vehicle Fueling	**11.70**	**14.04**	**0.82**	**61.50**

[1] Nozzle dispensing rate based on four standard gas station pump nozzles, two nozzles per AST, that can all be operated simultaneously at a rate of 10 gal/min.

[2] Annual requested throughput

[3] Emission factors (EF) are from AP-42 Section 5.2: Transportation and Marketing of Petroleum Liquids, Table 5.2-7 (June 2008).

[4] The following equation was used to calculate hourly emissions:
Hourly Emissions (lb/hr) = VOC Emission Factor (lb/1000-gal) * Nozzle Dispensing Rate (gal/min) * 60 (min/hr) / 1000

[5] The following equation was used to calculate annual emissions:
Annual emissions (ton/yr) = Annual Throughput (1000-gal/yr) * VOC Emission Factor (lb/1000-gal) / 2000 (lb/ton)

[6] Potential to emit (PTE) was calculated based on the number of hours in a year (8760 hours per year)
The following equation was used to calculate PTE:
PTE (ton/yr) = Hourly emissions (lb/hr) * 8760 (hr/yr) / 2000 (lb/ton)

[7] EF for UST Filling is for unbalanced, submerged filling, although vapor balance is employed during filling

[8] EF for Displacement Losses is for uncontrolled losses

Kirtland Air Force Base - Gasoline Storage at Building 471 Government West Service Station
Unit 4 AQUIS IDs 15004 and 25012

RVP-13 Speciation Fractions for Hazardous Air Pollutants (HAP)[9]

Compound	Vapor Weight (%)
Benzene	1.58%
Toluene	2.11%
Ethylbenzene	0.22%
Xylene	0.76%
1,1,2-Trichloroethane	0.02%

VOC Emissions with Speciated HAP Breakdown
Unit 4 AQUIS IDs 25012 and 15004

Pollutant	AQUIS ID 25012			AQUIS ID 15004		
	Annual Emissions (ton/yr)[10]	Potential to Emit (tons/yr)[10]	Hourly Emissions (lb/hr)[11]	Annual Emissions (ton/yr)[10]	Potential to Emit (tons/yr)[10]	Hourly Emissions (lb/hr)[11]
Total VOC Emissions	0.58	43.62	9.96	0.82	61.50	14.04
Total HAP Emissions	0.027	2.05	0.47	0.038	2.88	0.66
Benzene	0.0092	0.69	0.16	0.013	0.97	0.22
Toluene	0.012	0.92	0.21	0.017	1.30	0.30
Ethylbenzene	0.0013	0.096	0.022	0.0018	0.14	0.031
Xylene	0.0044	0.332	0.076	0.0062	0.47	0.11
1,1,2-Trichloroethane	0.00012	0.0087	0.0020	0.00016	0.012	0.0028

[9] Individual HAP emissions for gasoline sources were estimated by speciating total VOC emissions using representative RVP-13 gasoline vapor-phase weight percent values consistent with AP-42 methodologies.

[10] Speciated HAP emissions (ton/yr) = VOC emissions (ton/yr) * (HAP vapor weight %/100)

[11] Speciated HAP emissions (lb/hr) = VOC emissions (lb/hr) * (HAP vapor weight %/100)

5.2 Transportation And Marketing Of Petroleum Liquids[1-3]

5.2.1 General

The transportation and marketing of petroleum liquids involve many distinct operations, each of which represents a potential source of evaporation loss. Crude oil is transported from production operations to a refinery by tankers, barges, rail tank cars, tank trucks, and pipelines. Refined petroleum products are conveyed to fuel marketing terminals and petrochemical industries by these same modes. From the fuel marketing terminals, the fuels are delivered by tank trucks to service stations, commercial accounts, and local bulk storage plants. The final destination for gasoline is usually a motor vehicle gasoline tank. Similar distribution paths exist for fuel oils and other petroleum products. A general depiction of these activities is shown in Figure 5.2-1.

5.2.2 Emissions And Controls

Evaporative emissions from the transportation and marketing of petroleum liquids may be considered, by storage equipment and mode of transportation used, in four categories:

1. Rail tank cars, tank trucks, and marine vessels: loading, transit, and ballasting losses.
2. Service stations: bulk fuel drop losses and underground tank breathing losses.
3. Motor vehicle tanks: refueling losses.
4. Large storage tanks: breathing, working, and standing storage losses. (See Chapter 7, "Liquid Storage Tanks".)

Evaporative and exhaust emissions are also associated with motor vehicle operation, and these topics are discussed in AP-42 *Volume II: Mobile Sources*.

5.2.2.1 Rail Tank Cars, Tank Trucks, And Marine Vessels -

Emissions from these sources are from loading losses, ballasting losses, and transit losses.

5.2.2.1.1 Loading Losses -

Loading losses are the primary source of evaporative emissions from rail tank car, tank truck, and marine vessel operations. Loading losses occur as organic vapors in "empty" cargo tanks are displaced to the atmosphere by the liquid being loaded into the tanks. These vapors are a composite of (1) vapors formed in the empty tank by evaporation of residual product from previous loads, (2) vapors transferred to the tank in vapor balance systems as product is being unloaded, and (3) vapors generated in the tank as the new product is being loaded. The quantity of evaporative losses from loading operations is, therefore, a function of the following parameters:

- Physical and chemical characteristics of the previous cargo;
- Method of unloading the previous cargo;
- Operations to transport the empty carrier to a loading terminal;
- Method of loading the new cargo; and
- Physical and chemical characteristics of the new cargo.

The principal methods of cargo carrier loading are illustrated in Figure 5.2-2, Figure 5.2-3, and Figure 5.2-4. In the splash loading method, the fill pipe dispensing the cargo is lowered only part way into the cargo tank. Significant turbulence and vapor/liquid contact occur during the splash

loading operation, resulting in high levels of vapor generation and loss. If the turbulence is great enough, liquid droplets will be entrained in the vented vapors.

A second method of loading is submerged loading. Two types are the submerged fill pipe method and the bottom loading method. In the submerged fill pipe method, the fill pipe extends almost to the bottom of the cargo tank. In the bottom loading method, a permanent fill pipe is attached to the cargo tank bottom. During most of submerged loading by both methods, the fill pipe opening is below the liquid surface level. Liquid turbulence is controlled significantly during submerged loading, resulting in much lower vapor generation than encountered during splash loading.

The recent loading history of a cargo carrier is just as important a factor in loading losses as the method of loading. If the carrier has carried a nonvolatile liquid such as fuel oil, or has just been cleaned, it will contain vapor-free air. If it has just carried gasoline and has not been vented, the air in the carrier tank will contain volatile organic vapors, which will be expelled during the loading operation along with newly generated vapors.

Cargo carriers are sometimes designated to transport only one product, and in such cases are practicing "dedicated service". Dedicated gasoline cargo tanks return to a loading terminal containing air fully or partially saturated with vapor from the previous load. Cargo tanks may also be "switch loaded" with various products, so that a nonvolatile product being loaded may expel the vapors remaining from a previous load of a volatile product such as gasoline. These circumstances vary with the type of cargo tank and with the ownership of the carrier, the petroleum liquids being transported, geographic location, and season of the year.

One control measure for vapors displaced during liquid loading is called "vapor balance service", in which the cargo tank retrieves the vapors displaced during product unloading at bulk plants or service stations and transports the vapors back to the loading terminal. Figure 5.2-5 shows a tank truck in vapor balance service filling a service station underground tank and taking on displaced gasoline vapors for return to the terminal. A cargo tank returning to a bulk terminal in vapor balance service normally is saturated with organic vapors, and the presence of these vapors at the start of submerged loading of the tanker truck results in greater loading losses than encountered during nonvapor balance, or "normal", service. Vapor balance service is usually not practiced with marine vessels, although some vessels practice emission control by means of vapor transfer within their own cargo tanks during ballasting operations, discussed below.

Emissions from loading petroleum liquid can be estimated (with a probable error of ±30 percent)[4] using the following expression:

$$L_L = 12.46 \frac{SPM}{T} \quad (1)$$

where:

L_L = loading loss, pounds per 1000 gallons ($lb/10^3$ gal) of liquid loaded

S = a saturation factor (see Table 5.2-1)
P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia) (see Section 7.1, "Organic Liquid Storage Tanks")
M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) (see Section 7.1, "Organic Liquid Storage Tanks")
T = temperature of bulk liquid loaded, °R (°F + 460)

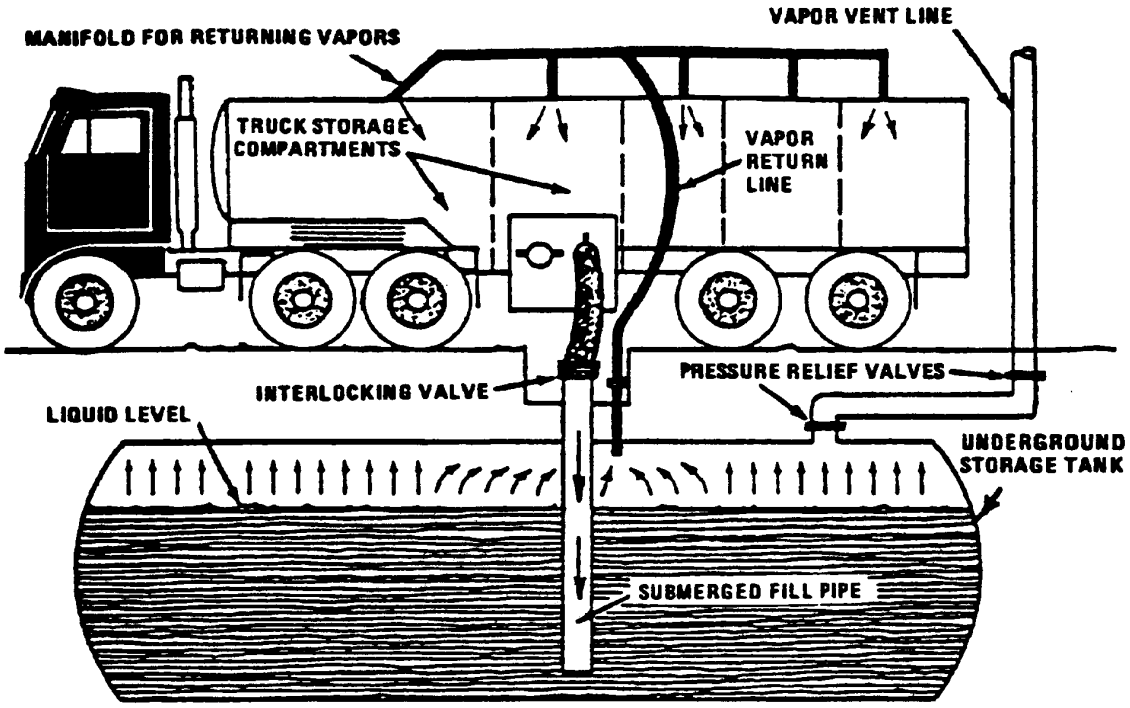


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

Table 5.2-1. SATURATION (S) FACTORS FOR CALCULATING PETROLEUM LIQUID LOADING LOSSES

Cargo Carrier	Mode Of Operation	S Factor
Tank trucks and rail tank cars	Submerged loading of a clean cargo tank	0.50
	Submerged loading: dedicated normal service	0.60
	Submerged loading: dedicated vapor balance service	1.00
	Splash loading of a clean cargo tank	1.45
	Splash loading: dedicated normal service	1.45
	Splash loading: dedicated vapor balance service	1.00
Marine vessels[a]	Submerged loading: ships	0.2
	Submerged loading: barges	0.5

[a] For products other than gasoline and crude oil. For marine loading of gasoline, use factors from Table 5.2-2. For marine loading of crude oil, use Equations 2 and 3 and Table 5.2-3.

The saturation factor, S, represents the expelled vapor's fractional approach to saturation, and it accounts for the variations observed in emission rates from the different unloading and loading methods. Table 5.2-1 lists suggested saturation factors.

Emissions from controlled loading operations can be calculated by multiplying the uncontrolled emission rate calculated in Equation 1 by an overall reduction efficiency term:

$$\left(1 - \frac{\text{eff}}{100}\right)$$

The overall reduction efficiency should account for the capture efficiency of the collection system as well as both the control efficiency and any downtime of the control device. Measures to reduce loading emissions include selection of alternate loading methods and application of vapor recovery equipment. The latter captures organic vapors displaced during loading operations and recovers the vapors by the use of refrigeration, absorption, adsorption, and/or compression. The recovered product is piped back to storage. Vapors can also be controlled through combustion in a thermal oxidation unit, with no product recovery. Figure 5.2-6 demonstrates the recovery of gasoline vapors from tank trucks during loading operations at bulk terminals. Control efficiencies for the recovery units range from 90 to over 99 percent, depending on both the nature of the vapors and the type of control equipment used.[5-6] However, not all of the displaced vapors reach the control device, because of leakage from both the tank truck and collection system. The collection efficiency should be assumed to be 99.2 percent for tanker trucks passing the MACT-level annual leak test (not more than 1 inch water column pressure change in 5 minutes after pressurizing to 18 inches water followed by pulling a vacuum of 6 inches water).[7] A collection efficiency of 98.7 percent (a 1.3 percent leakage rate) should be assumed for trucks passing the NSPS-level annual test (3 inches pressure change) A collection efficiency of 70 percent should be assumed for trucks not passing one of these annual leak tests[6].

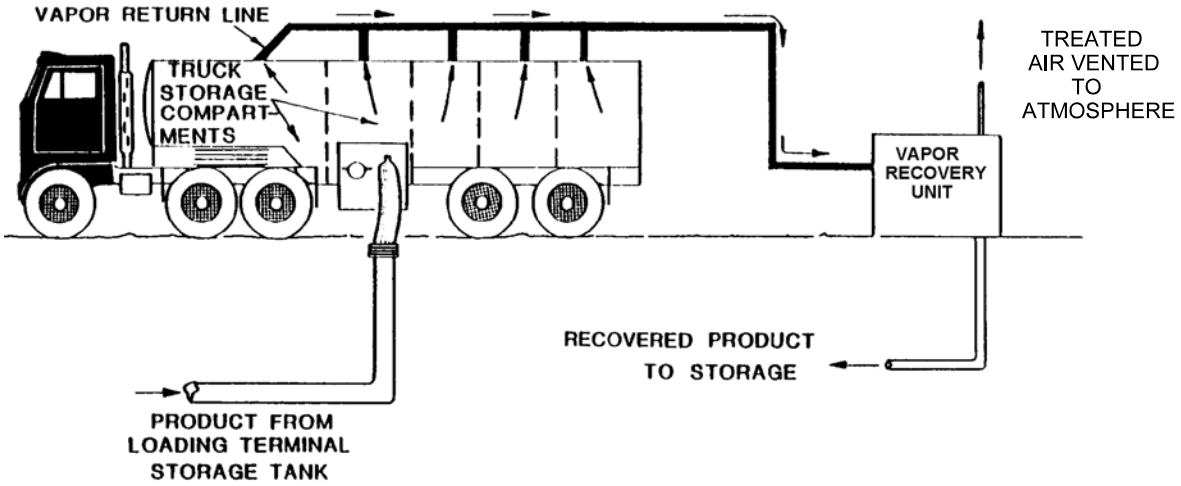


Figure 5.2-6. Tank truck loading with vapor recovery.

Sample Calculation -

Loading losses (L_L) from a gasoline tank truck in dedicated vapor balance service and practicing vapor recovery would be calculated as follows, using Equation 1:

Design basis -

Cargo tank volume is 8000 gal
Gasoline Reid vapor pressure (RVP) is 9 psia
Product temperature is 80°F
Vapor recovery efficiency is 95 percent
Vapor collection efficiency is 98.7 percent (NSPS-level annual leak test)

Loading loss equation -

$$L_L = 12.46 \frac{SPM}{T}\left(1 - \frac{eff}{100}\right)$$

where:

S = saturation factor (see Table 5.2-1) - 1.00
P = true vapor pressure of gasoline = 6.6 psia
M = molecular weight of gasoline vapors = 66
T = temperature of gasoline = 540°R
eff = overall reduction efficiency (95 percent control x 98.7 percent collection) = 94 percent

$$L_L = 12.46 \frac{(1.00)(6.6)(66)}{540}\left(1 - \frac{94}{100}\right)$$

$$= 0.60 \text{ lb}/10^3 \text{ gal}$$

Total loading losses are:

$$(0.60 \text{ lb}/10^3 \text{ gal})(8.0 \times 10^3 \text{ gal}) = 4.8 \text{ pounds (lb)}$$

Measurements of gasoline loading losses from ships and barges have led to the development of emission factors for these specific loading operations.[8] These factors are presented in Table 5.2-2 and should be used instead of Equation 1 for gasoline loading operations at marine terminals. Factors are expressed in units of milligrams per liter (mg/L) and pounds per 1000 gallons (lb/10^3 gal).

Table 5.2-7 (Metric And English Units). EVAPORATIVE EMISSIONS FROM GASOLINE SERVICE STATION OPERATIONS[a]

Emission Source	Emission Rate	
	mg/L Throughput	lb/10^3 gal Throughput
Filling underground tank (Stage I)		
Submerged filling	880	7.3
Splash filling	1,380	11.5
Balanced submerged filling	40	0.3
Underground tank breathing and emptying[b]	120	1.0
Vehicle refueling operations (Stage II)		
Displacement losses (uncontrolled)[c]	1,320	11.0
Displacement losses (controlled)	132	1.1
Spillage	80	0.7

[a] Factors are for VOC as well as total organic emissions, because of the methane and ethane content of gasoline evaporative emissions is negligible.
[b] Includes any vapor loss between underground tank and gas pump.
[c] Based on Equation 6, using average conditions.

A second source of vapor emissions from service stations is underground tank breathing. Breathing losses occur daily and are attributable to gasoline evaporation and barometric pressure changes. The frequency with which gasoline is withdrawn from the tank, allowing fresh air to enter to enhance evaporation, also has a major effect on the quantity of these emissions. An average breathing emission rate is 120 mg/L (1.0 lb/1000 gal) of throughput.

5.2.2.3 Motor Vehicle Refueling -

Service station vehicle refueling activity also produces evaporative emissions. Vehicle refueling emissions come from vapors displaced from the automobile tank by dispensed gasoline and from spillage. The quantity of displaced vapors depends on gasoline temperature, auto tank temperature, gasoline RVP, and dispensing rate. Equation 6 can be used to estimate uncontrolled displacement losses from vehicle refueling for a particular set of conditions.[14]

$$E_R = 264.2\ [(-5.909) - 0.0949\ (\Delta T) + 0.0884\ (T_D) + 0.485\ (RVP)] \quad (6)$$

where:

E_R = refueling emissions, mg/L
ΔT = difference between temperature of fuel in vehicle tank and temperature of dispensed fuel, °F
T_D = temperature of dispensed fuel, °F
RVP = Reid vapor pressure, psia

Note that this equation and the spillage loss factor are incorporated into the *MOBILE* model. The *MOBILE* model allows for disabling of this calculation if it is desired to include these emissions in the stationary area source portion of an inventory rather than in the mobile source portion. It is estimated that the uncontrolled emissions from vapors displaced during vehicle refueling average 1320 mg/L (11.0 lb/1000 gal) of dispensed gasoline.[5,13]

Spillage loss is made up of contributions from prefill and postfill nozzle drip and from spit-back and

Table 7.1-2. Properties (M_V, M_L, P_{VA}, W_L) Of Selected Petroleum Liquids[a, e, h]

Petroleum Liquid Mixture	Vapor Molecular Weight[a] (M_V) lb/lb-mole	Liquid Molecular Weight[b] (M_L) lb/lb-mole	Liquid Density[a] (W_L) lb/gal	ASTM D86 Distillation Slope[c] (S) ºF/vol %	Vapor Pressure Equation Constant[d] (A) dimensionless	Vapor Pressure Equation Constant[d] (B) ºR	True Vapor Pressure (at 60 °F) (P_{VA}) psia
Midcontinent Crude Oil	50	207	7.1	–	Figure 7.1-16	Figure 7.1-16	–
Refined Petroleum Stocks	–	–	–	–	Figure 7.1-15	Figure 7.1-15	–
Motor Gasoline RVP 13	62	92	5.6	3.0	11.644	5043.6	7.0
Motor Gasoline RVP 10	66 [e]	92	5.6	3.0	11.724	5237.3	5.2
Motor Gasoline RVP 7	68	92	5.6	3.0	11.833	5500.6	3.5
Light Naphtha RVP 9-14	–	–	–	3.5	–	–	–
Naphtha RVP 2-8	–	–	–	2.5	–	–	–
Aviation Gasoline	–	–	–	2.0	–	–	–
Jet Kerosene (Jet A)	130	162	7.0	–	12.390	8933.0	0.008
No. 2 Fuel Oil (Diesel)	130	188	7.1	–	12.101	8907.0	0.006
No. 6 Fuel Oil [f]	130	387	7.9	–	10.781	8933.0	0.002
Vacuum Residual Oil[g]	190	387	7.9	–	10.104	10,475.5	0.00004

[a] References 10 and 11

[b] Liquid molecular weights from "Memorandum from Patrick B. Murphy, Radian/RTP to James F. Durham, EPA/CPB Concerning Petroleum Refinery Liquid HAP and Properties Data, August 10, 1993," as adopted in versions 3.1 and 4.0 of EPA's TANKS software.

[c] Reference 4.

[d] For motor gasolines, see Figure 7.1-15;

for crude oil, see Figure 7.1-16;

for Jet Naphtha, Jet Kerosene, and No. 2 Fuel Oil, see Barnett and Hibbard[10];

for No. 6 Fuel Oil.[22]

[e] Alternatively, in the absence of measured data, a value of 66 lb/lb-mole may be assumed for all gasolines, in that the variability shown as a function of RVP is speculative.

[f] This is for a blend of Vacuum Residual Oil with a light distillate cutter stock, or similar mixture. Vapor pressure constants given will result in higher vapor pressure values than shown previously in AP-42 for Residual Oil No. 6.

[g] This is the straight residue from the bottom of the vacuum distillation column, prior to any further processing or blending. Properties given for Vacuum Residual Oil are those given for Residual Oil No. 6 previously in AP-42.

[h] Jet Naptha (JP-4) was removed from this table because it is no longer produced or procured. "Coordinating Research Council, Aviation Fuel Properties Handbook, CRC Report No. 663"

Attachment D

Supporting Documentation

Attachment D-1

Unit #1 AQUIS ID 22005-2

TANKS v. 4.09d Revised Outputs

PTE Emissions

TANKS
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification		
Air Tank ID:	22005-2	
City:	Albuquerque	
State:	New Mexico	
Company:	Kirtland Air Force Base	
Tank Type:	Horizontal Fixed Roof	
Description:		
Tank Dimensions		
Shell Length (ft):		14.00
Diameter (ft):		8.00
Volume (gallons):		5,000.00
Turnovers:		31,536.00
Net Throughput (gal/yr):		157,680,000.00
Is Tank Heated (Yes/No):	No	
Is Tank Underground (Yes/No/Convault):	No	
Paint Characteristics		
Shell Color/Shade:	White	
Shell Condition:	Good	
Breather Vent Settings		
Vacuum Settings (psig):		-0.03
Pressure Settings (psig):		0.03

Meteorological Data used in Emissions Calculations: Albuquerque, NM (Avg Atmospheric Pressure = 12.13 psia)

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp. (deg f)	Vapor Pressures (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Gasoline	All	59.90	54.37	65.43	57.93	6.76	5.90	7.71	62.00	0.00	0.00	92.00	
1,1,2-Trichloroethane	All	59.90	54.37	65.43	57.93	0.24	0.20	0.29	133.40	0.08	0.00	133.40	Option 2: A=6.945 B=1310.3 C=208.74
Benzene	All	59.90	54.37	65.43	57.93	1.17	1.00	1.36	78.11	1.32	0.02	78.11	Option 2: A=6.906 B=1211 C=220.79
Ethylbenzene	All	59.90	54.37	65.43	57.93	0.10	0.08	0.12	106.17	2.07	0.00	106.17	Option 2: A=6.95 B=1419.3 C=212.61
Toluene	All	59.90	54.37	65.43	57.93	0.33	0.28	0.39	92.13	6.22	0.02	92.14	Option 2: A=7.017 B=1377.6 C=222.64
Unidentified Components	All	59.90	54.37	65.43	57.93	30.26	26.45	34.49	61.08	-16.89	0.95	68.61	
Xylene (Mixed)	All	59.90	54.37	65.43	57.93	0.09	0.07	0.11	106.17	8.20	0.01	106.17	Option 2: A=7.009 B=1462.266 C=215.11

Annual Emissions Report

		Losses (lbs)		
Mixture/Components	**Month**	**Working Loss**	**Breathing Loss**	**Total Emissions**
Gasoline	All	265,539.56	2,156.74	267,696.30
1,1,2-Trichloroethane	All	53.11	0.43	53.54
Benzene	All	4,195.53	34.08	4,229.61
Ethylbenzene	All	584.19	4.74	588.93
Toluene	All	5,602.88	45.51	5,648.39
Unidentified Components	All	253,085.75	2,055.59	255,141.34
Xylene (Mixed)	All	2,018.10	16.39	2,034.49

Annual Emission Calculations

	All	All	All	All	All	All	All
Mixture Name:	Gasoline	1,1,2-Trichloroethane	Benzene	Ethylbenzene	Toluene	Unidentified Components	Xylene (Mixed)
Standing Losses (lb):	2,156.74	0.43	34.08	4.74	45.51	2,055.59	16.39
Vapor Space Volume (cu ft):	669.24						
Vapor Density (lb/cu ft):	0.08						
Vapor Space Expansion Factor:	0.37						
Vented Vapor Saturation Factor:	0.32						
Tank Vapor Space Volume							
Vapor Space Volume (cu ft):	669.24						
Tank Diameter (ft):	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Effective Diameter (ft):	11.94	11.94	11.94	11.94	11.94	11.94	11.94
Vapor Space Outage (ft):	5.97						
Tank Shell Length (ft):	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Vapor Density							
Vapor Density (lb/cu ft):	0.08						
Vapor Molecular Weight (lb/lb-mole):	62.00	133.40	78.11	106.17	92.13	61.08	106.17
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.76	0.24	1.17	0.10	0.33	30.26	0.09
Daily Average Liquid Surface Temperature (deg R):	519.57	519.57	519.57	519.57	519.57	519.57	519.57
Daily Average Ambient Temperature (deg F):	57.91	57.91	57.91	57.91	57.91	57.91	57.91
Ideal Gas Constant R (psia cu ft/lb-mol-deg R):	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg R):	517.60	517.60	517.60	517.60	517.60	517.60	517.60
Tank Paint Solar Absorptance (Shell):	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Tank Paint Solar Absorptance (Roof):	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily Total Solar Insolation Factor (btu/sq ft day):	1,721.67	1,721.67	1,721.67	1,721.67	1,721.67	1,721.67	1,721.67

Annual Emission Calculations

	All	All	All	All	All	All	All
Mixture Name:	Gasoline	1,1,2-Trichloroethane	Benzene	Ethylbenzene	Toluene	Unidentified Components	Xylene (Mixed)
Vapor Space Expansion Factor							
Vapor Space Expansion Factor:	0.37						
Vapor Space Expansion Factor (continued)							
Daily Vapor Temperature Range (deg R):	22.12	22.12	22.12	22.12	22.12	22.12	22.12
Daily Vapor Pressure Range (psia):	1.81	0.00	0.00	0.00	0.00	0.00	0.00
Breather Vent Pressure Setting Range (psia):	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.76	0.24	1.17	0.10	0.33	30.26	0.09
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	5.90	0.20	1.00	0.08	0.28	26.45	0.07
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	7.71	0.29	1.36	0.12	0.39	34.49	0.11
Daily Average Liquid Surface Temperature (deg R):	519.57	519.57	519.57	519.57	519.57	519.57	519.57
Daily Minimum Liquid Surface Temperature (deg R):	514.04	514.04	514.04	514.04	514.04	514.04	514.04
Daily Maximum Liquid Surface Temperature (deg R):	525.10	525.10	525.10	525.10	525.10	525.10	525.10
Daily Average Ambient Temperature (deg R):	57.91	57.91	57.91	57.91	57.91	57.91	57.91
Vented Vapor Saturation Factor							
Vented Vapor Saturation Factor:	0.32						
Vapor Space Outage (ft):	5.97						
Working Losses (lb):	265,539.56	53.11	4,195.53	584.19	5,602.88	253,085.75	2,018.10
Vapor Molecular Weight (lb/lb-mole):	62.00	133.40	78.11	106.17	92.13	61.08	106.17
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.76	0.24	1.17	0.10	0.33	30.26	0.09
Net Throughput (gal):	157,680,000.00	157,680,000.00	157,680,000.00	157,680,000.00	157,680,000.00	157,680,000.00	157,680,000.00
Annual Turnovers:	31,536.00	31,536.00	31,536.00	31,536.00	31,536.00	31,536.00	31,536.00
Turnover Factor:	31,536.00	31,536.00	31,536.00	31,536.00	31,536.00	31,536.00	31,536.00
Tank Diameter (ft):	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Working Loss Product Factor:	1.00						
Total Losses (lb):	267,696.30	53.54	4,229.61	588.93	5,648.39	255,141.34	2,034.49

End of Report

Attachment D-1

Unit #1 AQUIS ID 22005-2

TANKS v. 4.09d Revised Outputs

Annual Emissions

TANKS
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification		
Air Tank ID:	22005-2	
City:	Albuquerque	
State:	New Mexico	
Company:	Kirtland Air Force Base	
Tank Type:	Horizontal Fixed Roof	
Description:		
Tank Dimensions		
Shell Length (ft):		14.00
Diameter (ft):		8.00
Volume (gallons):		5,000.00
Turnovers:		28.00
Net Throughput (gal/yr):		140,000.00
Is Tank Heated (Yes/No):	No	
Is Tank Underground (Yes/No/Convault):	No	
Paint Characteristics		
Shell Color/Shade:	White	
Shell Condition:	Good	
Breather Vent Settings		
Vacuum Settings (psig):		-0.03
Pressure Settings (psig):		0.03

Meteorological Data used in Emissions Calculations: Albuquerque, NM (Avg Atmospheric Pressure = 12.13 psia)

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp. (deg f)	Vapor Pressures (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Gasoline	All	59.90	54.37	65.43	57.93	6.76	5.90	7.71	62.00	0.00	0.00	92.00	
1,1,2-Trichloroethane	All	59.90	54.37	65.43	57.93	0.24	0.20	0.29	133.40	0.08	0.00	133.40	Option 2: A=6.945 B=1310.3 C=208.74
Benzene	All	59.90	54.37	65.43	57.93	1.17	1.00	1.36	78.11	1.32	0.02	78.11	Option 2: A=6.906 B=1211 C=220.79
Ethylbenzene	All	59.90	54.37	65.43	57.93	0.10	0.08	0.12	106.17	2.07	0.00	106.17	Option 2: A=6.95 B=1419.3 C=212.61
Toluene	All	59.90	54.37	65.43	57.93	0.33	0.28	0.39	92.13	6.22	0.02	92.14	Option 2: A=7.017 B=1377.6 C=222.64
Unidentified Components	All	59.90	54.37	65.43	57.93	30.26	26.45	34.49	61.08	-16.89	0.95	68.61	
Xylene (Mixed)	All	59.90	54.37	65.43	57.93	0.09	0.07	0.11	106.17	8.20	0.01	106.17	Option 2: A=7.009 B=1462.266 C=215.11

Annual Emissions Report

		Losses (lbs)		
Mixture/Components	**Month**	**Working Loss**	**Breathing Loss**	**Total Emissions**
Gasoline	All	1,406.57	2,156.74	3,563.31
1,1,2-Trichloroethane	All	0.28	0.43	0.71
Benzene	All	22.22	34.08	56.30
Ethylbenzene	All	3.09	4.74	7.83
Toluene	All	29.68	45.51	75.19
Unidentified Components	All	1,340.61	2,055.59	3,396.20
Xylene (Mixed)	All	10.69	16.39	27.08

Annual Emission Calculations

	All	All	All	All	All	All	All
Mixture Name:	Gasoline	1,1,2-Trichloroethane	Benzene	Ethylbenzene	Toluene	Unidentified Components	Xylene (Mixed)
Standing Losses (lb):	2,156.74	0.43	34.08	4.74	45.51	2,055.59	16.39
Vapor Space Volume (cu ft):	669.24						
Vapor Density (lb/cu ft):	0.08						
Vapor Space Expansion Factor:	0.37						
Vented Vapor Saturation Factor:	0.32						
Tank Vapor Space Volume							
Vapor Space Volume (cu ft):	669.24						
Tank Diameter (ft):	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Effective Diameter (ft):	11.94	11.94	11.94	11.94	11.94	11.94	11.94
Vapor Space Outage (ft):	5.97						
Tank Shell Length (ft):	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Vapor Density							
Vapor Density (lb/cu ft):	0.08						
Vapor Molecular Weight (lb/lb-mole):	62.00	133.40	78.11	106.17	92.13	61.08	106.17
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.76	0.24	1.17	0.10	0.33	30.26	0.09
Daily Average Liquid Surface Temperature (deg R):	519.57	519.57	519.57	519.57	519.57	519.57	519.57
Daily Average Ambient Temperature (deg F):	57.91	57.91	57.91	57.91	57.91	57.91	57.91
Ideal Gas Constant R (psia cu ft/lb-mol-deg R):	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg R):	517.60	517.60	517.60	517.60	517.60	517.60	517.60
Tank Paint Solar Absorptance (Shell):	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Tank Paint Solar Absorptance (Roof):	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily Total Solar Insolation Factor (btu/sq ft day):	1,721.67	1,721.67	1,721.67	1,721.67	1,721.67	1,721.67	1,721.67

Annual Emission Calculations

	All	All	All	All	All	All	All
Mixture Name:	Gasoline	1,1,2-Trichloroethane	Benzene	Ethylbenzene	Toluene	Unidentified Components	Xylene (Mixed)
Vapor Space Expansion Factor							
Vapor Space Expansion Factor:	0.37						
Vapor Space Expansion Factor (continued)							
Daily Vapor Temperature Range (deg R):	22.12	22.12	22.12	22.12	22.12	22.12	22.12
Daily Vapor Pressure Range (psia):	1.81	0.00	0.00	0.00	0.00	0.00	0.00
Breather Vent Pressure Setting Range (psia):	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.76	0.24	1.17	0.10	0.33	30.26	0.09
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	5.90	0.20	1.00	0.08	0.28	26.45	0.07
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	7.71	0.29	1.36	0.12	0.39	34.49	0.11
Daily Average Liquid Surface Temperature (deg R):	519.57	519.57	519.57	519.57	519.57	519.57	519.57
Daily Minimum Liquid Surface Temperature (deg R):	514.04	514.04	514.04	514.04	514.04	514.04	514.04
Daily Maximum Liquid Surface Temperature (deg R):	525.10	525.10	525.10	525.10	525.10	525.10	525.10
Daily Average Ambient Temperature (deg R):	57.91	57.91	57.91	57.91	57.91	57.91	57.91
Vented Vapor Saturation Factor							
Vented Vapor Saturation Factor:	0.32						
Vapor Space Outage (ft):	5.97						
Working Losses (lb):	1,406.57	0.28	22.22	3.09	29.68	1,340.61	10.69
Vapor Molecular Weight (lb/lb-mole):	62.00	133.40	78.11	106.17	92.13	61.08	106.17
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.76	0.24	1.17	0.10	0.33	30.26	0.09
Net Throughput (gal):	140,000.00	140,000.00	140,000.00	140,000.00	140,000.00	140,000.00	140,000.00
Annual Turnovers:	28.00	28.00	28.00	28.00	28.00	28.00	28.00
Turnover Factor:	28.00	28.00	28.00	28.00	28.00	28.00	28.00
Tank Diameter (ft):	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Working Loss Product Factor:	1.00						
Total Losses (lb):	3,563.31	0.71	56.30	7.83	75.19	3,396.20	27.08

End of Report

Attachment D-2
Unit #2 AQUIS IDs 22003 & 22004
TANKS v. 4.09d Historic Outputs
PTE Emissions

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	22003
City:	Albuquerque
State:	New Mexico
Company:	Kirtland AFB
Type of Tank:	Horizontal Tank
Description:	Gasoline fuel AST, Gov't East Service Station

Tank Dimensions

Shell Length (ft):	27.00
Diameter (ft):	8.00
Volume (gallons):	10,000.00
Turnovers:	1,051.20
Net Throughput(gal/yr):	10,512,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

22003 - Horizontal Tank
Albuquerque, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 13)	All	58.54	51.41	65.66	56.17	6.7593	5.9014	7.7134	62.0000			92.00	Option 4: RVP=13, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

22003 - Horizontal Tank
Albuquerque, New Mexico

Annual Emission Calcaulations

Standing Losses (lb):	3,713.4716
Vapor Space Volume (cu ft):	864.4382
Vapor Density (lb/cu ft):	0.0754
Vapor Space Expansion Factor:	0.3800
Vented Vapor Saturation Factor:	0.4110
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	864.4382
Tank Diameter (ft):	8.0000
Effective Diameter (ft):	16.5879
Vapor Space Outage (ft):	4.0000
Tank Shell Length (ft):	27.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0754
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Daily Avg. Liquid Surface Temp. (deg. R):	518.2062
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	515.8442
Tank Paint Solar Absorptance (Shell):	0.1700

Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.3800
Daily Vapor Temperature Range (deg. R):	28.5089
Daily Vapor Pressure Range (psia):	1.8120
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	5.9014
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	7.7134
Daily Avg. Liquid Surface Temp. (deg R):	518.2062
Daily Min. Liquid Surface Temp. (deg R):	511.0790
Daily Max. Liquid Surface Temp. (deg R):	525.3334
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.4110
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	6.7593
Vapor Space Outage (ft):	4.0000
Working Losses (lb):	20,474.8358
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Annual Net Throughput (gal/yr.):	10,512,000.0000
Annual Turnovers:	1,051.2000
Turnover Factor:	0.1952
Tank Diameter (ft):	8.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	24,188.3074

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

22003 - Horizontal Tank
Albuquerque, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 13)	20,474.84	3,713.47	24,188.31

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	22004
City:	Albuquerque
State:	New Mexico
Company:	Kirtland AFB
Type of Tank:	Horizontal Tank
Description:	Gasoline fuel AST, Gov't East Service Station

Tank Dimensions

Shell Length (ft):	27.00
Diameter (ft):	8.00
Volume (gallons):	10,000.00
Turnovers:	1,051.20
Net Throughput(gal/yr):	10,512,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

22004 - Horizontal Tank
Albuquerque, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 13)	All	58.54	51.41	65.66	56.17	6.7593	5.9014	7.7134	62.0000			92.00	Option 4: RVP=13, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

22004 - Horizontal Tank
Albuquerque, New Mexico

Annual Emission Calcaulations

Standing Losses (lb):	3,713.4716
Vapor Space Volume (cu ft):	864.4382
Vapor Density (lb/cu ft):	0.0754
Vapor Space Expansion Factor:	0.3800
Vented Vapor Saturation Factor:	0.4110
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	864.4382
Tank Diameter (ft):	8.0000
Effective Diameter (ft):	16.5879
Vapor Space Outage (ft):	4.0000
Tank Shell Length (ft):	27.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0754
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Daily Avg. Liquid Surface Temp. (deg. R):	518.2062
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	515.8442
Tank Paint Solar Absorptance (Shell):	0.1700

Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.3800
Daily Vapor Temperature Range (deg. R):	28.5089
Daily Vapor Pressure Range (psia):	1.8120
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	5.9014
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	7.7134
Daily Avg. Liquid Surface Temp. (deg R):	518.2062
Daily Min. Liquid Surface Temp. (deg R):	511.0790
Daily Max. Liquid Surface Temp. (deg R):	525.3334
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.4110
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	6.7593
Vapor Space Outage (ft):	4.0000
Working Losses (lb):	20,474.8358
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Annual Net Throughput (gal/yr.):	10,512,000.0000
Annual Turnovers:	1,051.2000
Turnover Factor:	0.1952
Tank Diameter (ft):	8.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	24,188.3074

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

22004 - Horizontal Tank
Albuquerque, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 13)	20,474.84	3,713.47	24,188.31

Attachment D-2
Unit #2 AQUIS IDs 22003 & 22004
TANKS v. 4.09d Historic Outputs
Annual Emissions

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	22003
City:	Albuquerque
State:	New Mexico
Company:	Kirtland AFB
Type of Tank:	Horizontal Tank
Description:	Gasoline fuel AST, Gov't East Service Station

Tank Dimensions

Shell Length (ft):	27.00
Diameter (ft):	8.00
Volume (gallons):	10,000.00
Turnovers:	51.00
Net Throughput(gal/yr):	510,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

22003 - Horizontal Tank
Albuquerque, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 13)	All	58.54	51.41	65.66	56.17	6.7593	5.9014	7.7134	62.0000			92.00	Option 4: RVP=13, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

22003 - Horizontal Tank
Albuquerque, New Mexico

Annual Emission Calcaulations	
Standing Losses (lb):	3,713.4716
Vapor Space Volume (cu ft):	864.4382
Vapor Density (lb/cu ft):	0.0754
Vapor Space Expansion Factor:	0.3800
Vented Vapor Saturation Factor:	0.4110
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	864.4382
Tank Diameter (ft):	8.0000
Effective Diameter (ft):	16.5879
Vapor Space Outage (ft):	4.0000
Tank Shell Length (ft):	27.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0754
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Daily Avg. Liquid Surface Temp. (deg. R):	518.2062
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	515.8442
Tank Paint Solar Absorptance (Shell):	0.1700

Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.3800
Daily Vapor Temperature Range (deg. R):	28.5089
Daily Vapor Pressure Range (psia):	1.8120
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	5.9014
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	7.7134
Daily Avg. Liquid Surface Temp. (deg R):	518.2062
Daily Min. Liquid Surface Temp. (deg R):	511.0790
Daily Max. Liquid Surface Temp. (deg R):	525.3334
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.4110
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	6.7593
Vapor Space Outage (ft):	4.0000
Working Losses (lb):	3,841.5262
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Annual Net Throughput (gal/yr.):	510,000.0000
Annual Turnovers:	51.0000
Turnover Factor:	0.7549
Tank Diameter (ft):	8.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	7,554.9978

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

22003 - Horizontal Tank
Albuquerque, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 13)	3,841.53	3,713.47	7,555.00

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	22004
City:	Albuquerque
State:	New Mexico
Company:	Kirtland AFB
Type of Tank:	Horizontal Tank
Description:	Gasoline fuel AST, Gov't East Service Station

Tank Dimensions

Shell Length (ft):	27.00
Diameter (ft):	8.00
Volume (gallons):	10,000.00
Turnovers:	21.00
Net Throughput(gal/yr):	210,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

22004 - Horizontal Tank
Albuquerque, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 13)	All	58.54	51.41	65.66	56.17	6.7593	5.9014	7.7134	62.0000			92.00	Option 4: RVP=13, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

22004 - Horizontal Tank
Albuquerque, New Mexico

Annual Emission Calcaulations

Standing Losses (lb):	3,713.4716
Vapor Space Volume (cu ft):	864.4382
Vapor Density (lb/cu ft):	0.0754
Vapor Space Expansion Factor:	0.3800
Vented Vapor Saturation Factor:	0.4110
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	864.4382
Tank Diameter (ft):	8.0000
Effective Diameter (ft):	16.5879
Vapor Space Outage (ft):	4.0000
Tank Shell Length (ft):	27.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0754
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Daily Avg. Liquid Surface Temp. (deg. R):	518.2062
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	515.8442
Tank Paint Solar Absorptance (Shell):	0.1700

Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.3800
Daily Vapor Temperature Range (deg. R):	28.5089
Daily Vapor Pressure Range (psia):	1.8120
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	5.9014
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	7.7134
Daily Avg. Liquid Surface Temp. (deg R):	518.2062
Daily Min. Liquid Surface Temp. (deg R):	511.0790
Daily Max. Liquid Surface Temp. (deg R):	525.3334
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.4110
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	6.7593
Vapor Space Outage (ft):	4.0000
Working Losses (lb):	2,095.3779
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Annual Net Throughput (gal/yr.):	210,000.0000
Annual Turnovers:	21.0000
Turnover Factor:	1.0000
Tank Diameter (ft):	8.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	5,808.8495

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

22004 - Horizontal Tank
Albuquerque, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 13)	2,095.38	3,713.47	5,808.85

Attachment D-3

Unit #3 AQUIS ID 22015

TANKS v. 4.09d Historic Outputs

PTE Emissions

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	22015
City:	Albuquerque
State:	New Mexico
Company:	Kirtland AFB
Type of Tank:	Horizontal Tank
Description:	E85 Tank at Gov't East Service Station

Tank Dimensions

Shell Length (ft):	28.60
Diameter (ft):	8.00
Volume (gallons):	10,000.00
Turnovers:	1,051.20
Net Throughput(gal/yr):	10,512,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

22015 - Horizontal Tank
Albuquerque, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
E-85 Fuel	All	58.54	51.41	65.66	56.17	7.9326	6.9456	9.0274	68.0000			0.00	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

22015 - Horizontal Tank
Albuquerque, New Mexico

Annual Emission Calcaulations	
Standing Losses (lb):	6,459.2274
Vapor Space Volume (cu ft):	915.6642
Vapor Density (lb/cu ft):	0.0970
Vapor Space Expansion Factor:	0.5343
Vented Vapor Saturation Factor:	0.3729
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	915.6642
Tank Diameter (ft):	8.0000
Effective Diameter (ft):	17.0723
Vapor Space Outage (ft):	4.0000
Tank Shell Length (ft):	28.6000
Vapor Density	
Vapor Density (lb/cu ft):	0.0970
Vapor Molecular Weight (lb/lb-mole):	68.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.9326
Daily Avg. Liquid Surface Temp. (deg. R):	518.2062
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	515.8442
Tank Paint Solar Absorptance (Shell):	0.1700

Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.5343
Daily Vapor Temperature Range (deg. R):	28.5089
Daily Vapor Pressure Range (psia):	2.0818
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.9326
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	6.9456
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	9.0274
Daily Avg. Liquid Surface Temp. (deg R):	518.2062
Daily Min. Liquid Surface Temp. (deg R):	511.0790
Daily Max. Liquid Surface Temp. (deg R):	525.3334
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.3729
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	7.9326
Vapor Space Outage (ft):	4.0000
Working Losses (lb):	26,354.3637
Vapor Molecular Weight (lb/lb-mole):	68.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.9326
Annual Net Throughput (gal/yr.):	10,512,000.0000
Annual Turnovers:	1,051.2000
Turnover Factor:	0.1952
Tank Diameter (ft):	8.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	32,813.5910

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

22015 - Horizontal Tank
Albuquerque, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
E-85 Fuel	26,354.36	6,459.23	32,813.59

Attachment D-3

Unit #3 AQUIS ID 22015

TANKS v. 4.09d Historic Outputs

Annual Emissions

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	22015
City:	Albuquerque
State:	New Mexico
Company:	Kirtland AFB
Type of Tank:	Horizontal Tank
Description:	E85 Tank at Gov't East Service Station

Tank Dimensions

Shell Length (ft):	28.60
Diameter (ft):	8.00
Volume (gallons):	10,000.00
Turnovers:	51.00
Net Throughput(gal/yr):	510,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

22015 - Horizontal Tank
Albuquerque, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
E-85 Fuel	All	58.54	51.41	65.66	56.17	7.9326	6.9456	9.0274	68.0000			0.00	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

22015 - Horizontal Tank
Albuquerque, New Mexico

Annual Emission Calcaulations	
Standing Losses (lb):	6,459.2274
Vapor Space Volume (cu ft):	915.6642
Vapor Density (lb/cu ft):	0.0970
Vapor Space Expansion Factor:	0.5343
Vented Vapor Saturation Factor:	0.3729
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	915.6642
Tank Diameter (ft):	8.0000
Effective Diameter (ft):	17.0723
Vapor Space Outage (ft):	4.0000
Tank Shell Length (ft):	28.6000
Vapor Density	
Vapor Density (lb/cu ft):	0.0970
Vapor Molecular Weight (lb/lb-mole):	68.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.9326
Daily Avg. Liquid Surface Temp. (deg. R):	518.2062
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	515.8442
Tank Paint Solar Absorptance (Shell):	0.1700

Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.5343
Daily Vapor Temperature Range (deg. R):	28.5089
Daily Vapor Pressure Range (psia):	2.0818
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.9326
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	6.9456
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	9.0274
Daily Avg. Liquid Surface Temp. (deg R):	518.2062
Daily Min. Liquid Surface Temp. (deg R):	511.0790
Daily Max. Liquid Surface Temp. (deg R):	525.3334
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.3729
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	7.9326
Vapor Space Outage (ft):	4.0000
Working Losses (lb):	4,944.6540
Vapor Molecular Weight (lb/lb-mole):	68.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.9326
Annual Net Throughput (gal/yr.):	510,000.0000
Annual Turnovers:	51.0000
Turnover Factor:	0.7549
Tank Diameter (ft):	8.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	11,403.8814

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

22015 - Horizontal Tank
Albuquerque, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
E-85 Fuel	4,944.65	6,459.23	11,403.88

Attachment E

Applicable Federal Regulations

Permit 3090-RV1 Emission Units				UTM coordinates	
Feature Description	**AQUIS ID**	**Permit Number**	**Applicable Federal Regulation**	**Easting m E**	**Northing m N**
FUEL – 15001– Gasoline Dispensing - B20359 - Gasoline - 2400 gal/hr	15001	3090-RV1	40 CFR 63 NESHAP, Subpart CCCCCC	358307.03	3879861.95
FUEL – 15004 – Gasoline Dispensing - B471 - Gasoline - 1200 gal/hr	15004	3090-RV1	40 CFR 63 NESHAP, Subpart CCCCCC	353985.96	3880197.99
FUEL – 15011 – E85 Fuel Dispensing - B20359 - E85 - 1200 gal/hr	15011	3090-RV1	40 CFR 63 NESHAP, Subpart CCCCCC	358316.96	3879861.02
FUEL – 16001 – Gasoline Loading - B1041 - Gasoline - 300 gal/min	16001	3090-RV1	40 CFR 63 NESHAP, Subpart BBBBBB	355994.47	3879621.99
FUEL – 22003 – Gasoline Storage - B20359 - Gasoline - 10000 gal	22003	3090-RV1	40 CFR 63 NESHAP, Subpart CCCCCC	358329.00	3879871.00
FUEL – 22004– Gasoline Storage - B20359 - Gasoline - 10000 gal	22004	3090-RV1	40 CFR 63 NESHAP, Subpart CCCCCC	358328.00	3879866.00
FUEL – 22005-2– Gasoline Storage - B1041 - Gasoline - 5000 gal	22005-2	3090-RV1	40 CFR 63 NESHAP, Subpart BBBBBB	356013.02	3879673.54
FUEL – 22015 – E85 Fuel Storage - B20359- E85 - 10000 gal	22015	3090-RV1	40 CFR 63 NESHAP, Subpart CCCCCC	358327.00	3879862.00
FUEL – 25012 – Gasoline Storage - B471 - Gasoline- 3000 gal	25012	3090-RV1	40 CFR 63 NESHAP, Subpart CCCCCC	353985.96	3880197.99