DES
DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY
air quality desert conservation PROGRAM sustainability

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PART 70 OPERATING PERMIT TECHNICAL SUPPORT DOCUMENT
(STATEMENT of BASIS)

APPLICATION FOR:
Renewal

SUBMITTED BY:
United States Air Force, Creech Air Force Base, 432nd Wing

FOR:
Creech Air Force Base
Source: 00473

LOCATION:
1065 Perimeter Road
Creech AFB, Nevada 89018

SIC code 9711, "National Security"
NAICS code 928110, "National Security"

Application Received: August 6, 2024

TSD Date: August 6, 2025

EXECUTIVE SUMMARY

Creech Air Force Base (Creech AFB) is a federally owned military installation located within the city limits of Indian Springs, Nevada. The source is located adjacent to the township of Indian Springs, Nevada, in the Indian Springs Valley (Hydrographic Area 161). The source is classified under SIC code 9711, "National Security" and NAICS code, 928110, "National Security". The source consists of the flight line and associated industrial infrastructure directly supporting flying operations, along with commercial and industrial uses that support the base's mission. Hydrographic Area 161 is currently designated as an attainment area for all regulated air pollutants. The source is not a categorical source as defined in AQR 12.2.2(j).

Creech AFB and the Nellis Test and Training Range (NTTR) comprise a single major source for purposes of New Source Review Applicability. However, DAQ issues separate Part 70 Operating Permits to Creech Air Force Base and NTTR for administrative purposes and to facilitate compliance demonstration. Creech Air Force Base operates under the authority of the 432nd Air Base Wing Commander.

Creech AFB individually is a major stationary source of NO_x and a synthetic minor source of PM_{10}, $PM_{2.5}$, CO, VOCs, and HAPs. Creech AFB is minor source of SO_2 and greenhouse gas (GHG) pollutants.

The source consists of fuel storage tanks and loading arms, fuel dispensing, external combustion units, internal combustion engines, a mineral processing operation, surface coating operations, and miscellaneous chemical usage. The source also includes the following designated insignificant activities: diesel fuel storage tanks and loading arms, diesel fuel dispensing, abrasive blasting, degreasers, woodworking operations, and fuel cell maintenance.

The source is subject to the requirements of 40 CFR Part 60, Subpart IIII, and 40 CFR Part 63, Subparts ZZZZ and CCCCCC.

The following table summarizes the source's potential to emit (PTE) of each regulated air pollutant from all emission units addressed by this Part 70 Operating Permit, as well as the PTE for the current Part 70 Operating Permit issued for NTTR.

Table 1: Emission Units PTE Summary (tons per year)

Pollutant	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	GHG[2]
Creech AFB PTE	4.04	4.04	112.16	29.17	0.87	31.94	9.55	34,471.49
NTTR PTE[3]	16.33	8.09	98.15	46.91	0.17	8.95	0.22	12,728.55
Source-wide PTE	20.37	12.13	210.31	76.08	1.04	40.89	9.77	47,200.04
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25[1]	-
Major Stationary Source Thresholds (PSD)	250	250	250	250	250	250	10/25[1]	-
Major Stationary Source Threshold (Nonattainment)			50			50		

[1]Ten tons for any individual hazardous air pollutant, or 25 tons for the combination of all hazardous air pollutants.
[2]Metric tons per year, CO_2e
[3]Sourced from NTTR new ATC permit issued on May 5, 2025.

DAQ will continue to require the sources to estimate their GHG potential to emit in terms of each individual pollutant (CO_2, CH_4, N_2O, SF_6 etc.). The TSD includes these PTEs for informational purposes.

DAQ has received delegated authority from the U.S. Environmental Protection Agency to implement the requirements of the Part 70 OP. Based on the information submitted by the applicant, supplemental information provided to the application, and a technical review performed by DAQ staff, DAQ proposes issuance of the renewal Part 70 OP.

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I. ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
ANFO	ammonium nitrate-fuel oil
AQR	Clark County Air Quality Regulation
ATC	Authority to Construct
BLM	Bureau of Land Management
CF	control factor
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CD	control device
DAQ	Division of Air Quality
DES	Clark County Department of Environment and Sustainability
DOM	date of manufacture
EF	emissions factor
EPA	U.S. Environmental Protection Agency
EU	emission unit
g/dscm	gram per dry standard cubic meter
gr/dscf	grains per dry standard cubic feet
GHG	greenhouse gas
HA	Hydrographic Area
HAP	hazardous air pollutant
hp	horsepower
kW	kilowatts
MMBtu/hr	Million British Thermal Units per Hour
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NO_X	nitrogen oxide(s)
$PM_{2.5}$	particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10}	particulate matter less than 10 microns in aerodynamic diameter
PSD	prevention of significant deterioration
PTE	potential to emit
RACT	Reasonably Achievable Control Technology
SCC	Source Classification Code
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	sulfur dioxide
SOP	standard operating procedure

Acronym	Term
TDS	Total Dissolved Solids
TPH	tons per hour
UTM	Universal Transverse Mercator
VGF	vibrating grizzly feeder
VMT	vehicle miles traveled
VOC	volatile organic compound

II. SOURCE DESCRIPTION

A. PROCESS DESCRIPTION

The mission of Creech AFB is to prepare Air Force personnel to participate in military activities around the world. The ground-based facilities at Creech AFB provide for the instruction of combat pilots who operate unmanned aircraft. Military personnel, aircraft, and associated support equipment must be in a continuous state of combat readiness for immediate deployment whenever and wherever needed. Activities include, but are not limited to, aerial gunnery training, rocketry, electronic warfare, tactical maneuvering and air support, and equipment and tactics development and testing.

In order to accurately quantify and document pollutant emission rates, various source categories have been identified. Each source category represents a subset of common emission units. The source categories are as follows:

1. **Storage Tanks/Fuel Dispensing/Fuel Loading:** This category encompasses all types of fuel that is consumed by the Base (general automotive gasoline, aviation gasoline, diesel, and jet fuels). The calculated PTE from this category includes emissions from storage tanks as well as for fuel dispensing activities.

2. **External Combustion:** This category includes boilers, water heaters, and furnaces that generate heat, steam, and hot water to support various industrial, institutional, or commercial activities. All of the external combustion emission units are now operating on propane. The two propane-fired spray booth heaters, used for the surface coating operation, are also included in this category. A natural gas source has not been established in, or near, the township of Indian Springs.

3. **Internal Combustion:** This category consists of stationary internal combustion engines that are used to power electric generators and fire pumps. All engines are operated on diesel fuel.

4. **Surface Coating:** Surface coating operations are performed in two spray booths at the facility. The paint booth located at Building 230 is used for painting of vehicles and miscellaneous parts. The paint booth at Bldg. 1004 is used for painting composite materials which comprise the body components of the unmanned aircraft.

5. **Miscellaneous Chemical Usage:** Any miscellaneous VOC and HAP containing operation except the surface coating operations are captured in this process.

6. **Woodworking:** Woodworking activities are minimal and are restricted to one building on the Base. Woodworking activities are considered insignificant.

7. **Degreasers:** Degreasers are used to remove lubricants, greases, and other unwanted materials from metal parts before servicing, surface coating, or installing into equipment. All of the degreasers are cold cleaner units which consist of an area to spray, brush, flush or immerse the metal parts to be cleaned with the solvent. For permitting purposes, this process is considered an insignificant activity.

8. **Fuel Cell Maintenance:** Each unmanned aircraft is equipped with four separate fuel cells. Maintenance and repair of these cells is part of scheduled maintenance for the aircraft. A fuel-purging process is required before any repairs can be made. For permitting purposes, this process is considered an insignificant activity.

9. **Blasting:** Media blasting units that are used for cleaning of small parts. For permitting purposes, this process is considered an insignificant activity.

B. ALTERNATE OPERATING SCENARIO(S)

None proposed.

C. PERMITTING HISTORY

Creech AFB and NTTR are adjoining military facilities operated by the USAF that have historically operated under a Part 70 Title V OP as a single stationary source. The two facilities previously operated under the same command authority, but the Installation Command Authority (ICA) for Creech AFB was transferred from the 99th Air Base Wing Commander to the 432nd Wing Commander in 2019. Because the facilities no longer operate under the same command authority, the permittee requested that each facility carry separate Part 70 OPs.

DAQ evaluated the permittee's request and based on EPA guidance and DAQ's assessment of the decision-making authority of the USAF, DAQ concluded that Creech AFB and NTTR comprise a single major source for purposes of NSR applicability. Because of the logistical challenges associated with operating the facilities as a single stationary source under separate command authorities, DAQ exercised its discretion by issuing separate Part 70 OPs to each facility, with the commanders at each facility as the sole responsible officials for their respective facilities. As a condition, all permits issued separately must collectively assure that all applicable conditions are met as required of any single permit holder.

On October 5, 2023, the permittee submitted an application for a new Part 70 OP authorizing DAQ to migrate the existing emissions units and associated conditions from Creech AFB into a separate permit for NTTR under the source ID: 18210.

DAQ issued the new Part 70 OP for NTTR on August 27, 2024. All NTTR emission units were migrated to the NTTR permit. This action did not include modifications to the existing emission units or changes to emission or operating limits. The conditions and limitations specific to NTTR were incorporated and updated as needed.

EUs and associated conditions and limitations that were migrated to the NTTR Part 70 OP are being removed from the Creech AFB Part 70 OP as of this permitting action.

The following represents permitting activities prior to this permitting action since the last renewal:

Table II-C-1: Permit History

Issue Date	Description
4/30/2020	Part 70 ATC – 12.4.3.2(b)
11/29/2021	Part 70 OP – Reopen for Cause
3/21/2022	Prior Notice Form
6/7/2022	Part 70 ATC – New
11/17/2022	Prior Notice Form
12/1/2022	Part 70 OP – Significant Revision
12/15/2022	Prior Notice Form
6/12/2023	Part 70 OP – Minor Revision
4/19/2023	Prior Notice Form
6/4/2024	Part 70 ATC - New

D. CURRENT PERMITTING ACTION

The permittee submitted an application for a renewal of the Part 70 OP on August 6, 2024. The permittee has proposed the following changes to the permit as part of the renewal:

1. Removal of all EUs permitted under the NTTR Part 70 OP. The following EUs located at NTTR and associated conditions and limitations have been removed from the permit:

    a. Internal combustion engines EUs: G025, G153, G154, G165, B001, NTTR1, and NTTR2.

    b. All mineral processing EUs: A01, A003, A003a, A003b, A015, A016, and A017.

2. Incorporate the ATC permit issued on June 4, 2024, into the Part 70 OP by adding a boiler (EU: W015) and a fire pump engine (EU: G173) and removing a boiler (EU: W007) and fire pump (EU: G026).

The permittee submitted an application for a minor revision to the Part 70 OP on May 8, 2025. DAQ has incorporated the minor revision application into this renewal. The permittee proposed to replace a <1.0 MMBtu/hr boiler located at Building 707 permitted under EU: W012 (boilers/heaters under 1.0 MMBtu/hr). The proposed boiler is rated at 1.0 MMBtu/hr, which is not less than 1.0 MMBtu/hr and cannot be permitted under EU: W012. Therefore, DAQ is including the boiler as a new emission unit (EU: W016).

DAQ has made the following additional changes to the permit:

1. Revised applicability emissions for Creech AFB to include source-wide applicability emissions of Creech AFB and NTTR. DAQ has determined that because Creech AFB and NTTR are considered a single stationary source for NSR applicability purposes, applicability emissions should include both facilities. The revised applicability emissions for PM_{10}, $PM_{2.5}$, CO, VOCs, and HAPs exceed major source thresholds. Therefore, Creech AFB is as a synthetic minor source for those pollutants. This change does not result in additional requirements for the source.

2. Update NO_x emissions for boiler EU: W003. The EU was replaced with a like-in-kind unit under a Prior Notice Form submitted by the permittee on November 17, 2022. The replacement unit has a maximum NO_x emission concentration of 10 ppm.

3. Incorporate the Prior Notice Form submitted on April 19, 2023, to temporarily relocate emergency generator EUs: G167, G127, and G142 to various locations within Creech AFB.

4. Revise boiler model and serial numbers for EUs: W008, W009, and W015 based on findings of compliance staff during a partial compliance evaluation conducted on April 14 and 15, 2025. DAQ also revised the MMBtu/hr rating and emissions of EU: W008.

5. Revise generator model numbers and engine horsepower ratings of four emergency generators (EUs: G168 – G171) based on findings of compliance staff during a partial compliance evaluation conducted on April 14 and 15, 2025. DAQ revised emissions based on the revised horsepower ratings.

E. EMISSION UNITS LIST

Tables II-E-1 through II-E-6 list the emission units covered by this Part 70 OP.

Table II-E-1: Tanks

EU	Description	Fuel	Capacity (gallons)	Location	SCC
J001	Aboveground Storage Tank	Gasoline	5,000	Building 687	40400302
J002	Aboveground Storage Tank	Gasoline	10,000	Building 688	40400302

Table II-E-2: Loading Arms

EU	Description	Fuel	Location	SCC
J014	Two Loading Arms (one loading; one unloading)	Gasoline	Building 691	40600702

Table II-E-3: Boilers, Furnaces, and Booth Heaters

EU	Description	Manufacturer	Fuel	Rating (MMBtu/hr)	Model #	Serial #	Location	SCC
W001	Boiler	Ajax	Propane	1.50	WRFP-1500	68237	Bldg. 71	10301002
W002	Boiler	Ajax	Propane	1.25	WFP-1250	56872	Bldg. 718	10301002
W003	Boiler	RBI	Propane	2.00	Futera III 2000	56024	Bldg. 1000	10301002
W005	Boiler	Unilux	Propane	1.05	DZ 100W	3820	Bldg. 1005	10301002
W006	Boiler	Unilux	Propane	1.31	VZ 150W	3884	Bldg. 1004	10301002
W008	Boiler	Weil McClain	Propane	2.049	**WCR2-G-15**	**072286977**	Bldg. 1009	10301002
W009	Boiler	Weil McClain	Propane	1.08	**WCR1-G-12**	**080830720**	Bldg. 120	10301002
W010	Boiler	Camus	Propane	1.50	DFPH-1501-MGI-HVS	121216648	Bldg. 1130	10301002
W011	Boiler	Camus	Propane	1.50	DFPH-1501-MGI-HVS	121216647	Bldg. 1130	10301002
W015N	Boiler	RBI	Propane	1.50	FW1500	122395683	Bldg. 719	10301002

EU	Description	Manufacturer	Fuel	Rating (MMBtu/hr)	Model #	Serial #	Location	SCC
W016 [N]	Boiler	RBI	Propane	1.00	Futera II 1000	TBD	Bldg. 707	10301002
W012	Boilers/Heaters (<1 MMBtu/hr)	Various	Propane	11.83	Various	Various	Various	10301002
W013	Furnaces/Heaters (<1 MMBtu/hr)	Various	Propane	9.99	Various	Various	Various	10301002
C003	Spray Booth Heater	Weather-Rite	Propane	2.916	TOT221VT	53748-1	Bldg. 230	10301002
C004	Spray Booth Heater	Weather-Rite	Propane	2.916	TOT221VT	53748-2	Bldg. 230	10301002

[N] New emission unit.
Bold = modified emission unit information.

Table II-E-4: Internal Combustion Units

EU	Description	Manufacturer	Rating	Model #	Serial #	Location	SCC
G003	Genset – Emergency	Onan	80 kW	DGDA-5627785	G030520964	Bldg. 83	20200102
	Engine – Diesel; DOM: 07/2003	Cummins	170 hp	6BT5.9-G6	46320778		
G005	Genset – Emergency	Cummins	125 kW	DSGAB-7514940	L080224037	Bldg. 89	20200102
	Engine – Diesel; DOM: 11/2008		250 hp	QSB7-G3NR3	46964168		
G006	Genset – Emergency	Onan	60 kw	DSFAD-2710150	A100080581	Bldg. 1217	20200102
	DOM: 2009	Cummins	145 hp	QSB5-G3NR3	73051603		
G013	Genset – Emergency	Cummins	150 kW	DSHAA-5754455	C060894365	Bldg. 707	20200102
	Engine – Diesel; DOM: 02/2006		364 hp	QSL9-G2	46584119		
G014	Genset – Emergency	Cummins	300 kW	DQHAB-5940835	K070135033	Bldg. 718	20200102
	Engine – Diesel; DOM: 11/2007		470 hp	QSM11-G4NR3	35212610		
G015	Genset – Emergency	Caterpillar	400 kW	LC6	G6B00485	Bldg. 718	20200102
	Engine – Diesel; DOM: 2005		610 hp	3456	7WG02944		
G016	Genset – Emergency	Cummins	350 kW	DFEG-6151105	A080149168	Bldg. 64	20200102
	Engine – Diesel; DOM: 10/2007		755 hp	QSX15-G9	79276400		
G017	Genset – Emergency	Cummins	750 kW	DQFAA-2427029	L090075224	Bldg. 718	20200102
	Engine – Diesel; 2010 EPA standards		1,490 hp	QST30-G5	37242049		

EU	Description	Manufacturer	Rating	Model #	Serial #	Location	SCC
G019	Genset – Emergency	Cummins	300 kW	DFCB-5694768	K040711736	Bldg. 1001	20200102
	Engine – Diesel; DOM: 9/2004		465 hp	NTA-855-G2	30371581		
G020	Fire Pump	Clarke	207 hp	JU6H-UFMO		Bldg. 1001	20200102
	Engine – Diesel; DOM: 02/2006	John Deere		6068TF220	PE6068T546292		
G021	Fire Pump	Clarke	207 hp	JU6H-UFMO		Bldg. 1001	20200102
	Engine – Diesel; DOM: 2/2006	John Deere		6068TF220	PE6068T547193		
G022	Fire Pump	Clarke	207 hp	JU6H-UFMO		Bldg. 1001	20200102
	Engine – Diesel; DOM: 02/2006	John Deere		6068TF220	PE6068T547200		
G027	Genset – Emergency	Cummins	125 kW	DGDK-5784942	A070007980	Bldg. 3951	20200102
	Engine – Diesel; DOM: 08/2006		207 hp	6BTAA5.9-G1	46656629		
G057	Genset – Emergency	Onan	1,750 kW	DQKAA-5936750	J070113763	Bldg. 1005	20200102
	Engine – Diesel DOM: 9/2007	Cummins	2,953 hp	QSKTA60-GE	33170322		
G058	Genset – Emergency	Generac	36 kW	5263390100	2082896	Bldg. 222	20200102
	Engine – Diesel; DOM: 2004	John Deere	48 hp	4024TF270D	PE4024T030746		
G117	Genset – Emergency	Cummins	300 kW	DQHAB-2321029	K090067670	Bldg. 85	20200102
	Engine – Diesel; DOM: 10/2009		470 hp	QSM11-G4NR3	35260722		
G118	Genset – Emergency	Cummins	1,500 kW	DQGAB-4902071	H100K17846	Bldg. 1009	20200102
	Engine – Diesel; DOM: 2010		2,220 hp	QSK50-G4	33181757		
G123	Genset – Emergency	Cummins	125 kW	DSGAB-4507043	D100116376	Bldg. 1052	20200102
	Engine – Diesel; DOM: 4/2010		250 hp	QSB7-G3NR3	73089655		
G124	Genset – Emergency	Caterpillar	100 kW	D100-6	CAT00C44ED4B01775	Bldg. 820	20200102
	Engine – Diesel; DOM: 2010		157 hp	C4.4	E5N019314		
G127	Genset – Emergency	Cummins	150 kW	DSHAA-6174070	A080147422	**Bldg. 279**	20200102
	Engine – Diesel; DOM: 11/2007		364 hp	QSL9-G2-NR3	21814024		
G130	Fire Pump	Clarke	175 hp	JU6H-UFM8		Bldg. 120	20200102
	Engine – Diesel; DOM: 7/2008	John Deere		6068TF220	PE6068T733372		

EU	Description	Manufacturer	Rating	Model #	Serial #	Location	SCC
G131	Fire Pump	Clarke	175 hp	JU6H-UFM8		Bldg. 120	20200102
	Engine – Diesel; DOM: 7/2008	John Deere		6068TF220	PE6068T733460		
G133	Fire Pump	Clarke	183 hp	JU6H-UF58	6068TF220	Bldg. 719	20200102
	Engine – Diesel; DOM: 2007	John Deere		6068TF220	PE6068T665693		
G134	Fire Pump	Clarke	183 hp	JU6H-UF58		Bldg. 719	20200102
	Engine – Diesel; DOM: 2007	John Deere		6068TF220	PE6068T665699		
G136	Genset – Emergency	Cummins	350 kW	DFEG-6195497	L100178507	Bldg. 1003	20200102
	Engine – Diesel; DOM: 12/2010		755 hp	QSX15-G9	79452962		
G137	Genset – Emergency	Cummins	125 kW	DSHAE-6748751	A080152619	Bldg. 1019	20200102
	Engine – Diesel; DOM: 01/2008		364 hp	QSL9-G2NR3	46852086		
G138	Genset – Emergency	Cummins	300 kW	DQHAB-7235958	I080206592	Bldg. 1022	20200102
	Engine – Diesel; DOM: 08/2008		470 hp	QSM11-G4NR3	35238399		
G139	Genset – Emergency	Cummins	35 kW	DGGD-5628067	G030523428	Bldg. 1078	20200102
	Engine – Diesel; DOM: 2003		56 hp	B3.3G1	68013985		
G140	Genset – Emergency	Onan	35 kW	DGBB-5689864	H040679901	Bldg. 1050	20200102
	Engine – Diesel; DOM: 2004	Cummins	68 hp	4B3.9-G2	46418681		
G142	Genset – Emergency	Cummins	200 kW	DSHAC-5770629	H060964339	Bldg. 1210	20200102
	Engine – Diesel; DOM: 07/2006		364 hp	QSL9-G2	46646741		
G143	Genset – Emergency	Cummins	35 kW	DGGD-5962267	A080142386	Bldg. 3925	20200102
	Engine – Diesel; DOM: 10/2007		81 hp	4BT3.3-G6NR	68088456		
G145	Genset – Emergency	Cummins	7.5 kW	DNAC-5664495	B048598967	Bldg. 279	20200102
	Engine – Diesel; DOM: 2004	Onan	35 hp	LPW2	03020639		
G148	Genset – Emergency	Cummins	100 kW	DSGAA-6657732	B110192988	Bldg. 104	20200102
	Engine – Diesel; DOM: 2/2011		250 hp	QSB7-G3NR3	73196899		
G149	Genset – Emergency	Cummins	250 kW	DQDAA-8362897	K110268075	Bldg. 1000	20200102
	Engine – Diesel; DOM: 9/2011		399 hp	QSL9-G3NR3	7330516		

EU	Description	Manufacturer	Rating	Model #	Serial #	Location	SCC
G150	Genset – Emergency	Cummins	80 kW	DSFAE-1201483	D120322250	Bldg. 1004	20200102
	Engine – Diesel; DOM: 3/2012		145 hp	QSB5-G3NR3	73377600		
G151	Fire Pump	Clarke	311 hp	JW6H-UFADF0	RG6090L100155	Bldg. 799	20200102
	Engine – Diesel; DOM: 2010	John Deere		6090HFC47A.B.			
G152	Fire Pump	Clarke	311 hp	JW6H-UFADF0	RG6090L100152	Bldg. 799	20200102
	Engine – Diesel; DOM: 2010	John Deere		6090HFC47A.B.			
G156	Genset – Emergency	MTU Onsite Energy	900 kW	900-RXC6DT2	357380-1-1-0313	Bldg. 1055	20200102
	Engine – Diesel; DOM: 3/2013	MTU-DD Detroit Diesel	1,354 hp	16V2000G45TB	5362010743		
G157	Genset – Emergency	Cummins	40 kW	DGHCC-1322028	B130462367	Bldg. 1033	20200102
	Engine – Diesel; DOM: 2012		69 hp	4BT3.3-G5	72007652		
G158	Genset – Emergency	Cummins	200 kW	DSGAE-1336099	H130555078	Bldg. 1150	20200102
	Engine – Diesel; DOM: 8/2013		324 hp	QSB7-G5-NR3	73568652		
G159	Genset – Emergency	Cummins	1,250 kW	DQGAA-1217643	A130438099	Bldg. 1130	20200102
	Engine – Diesel; DOM: 10/2012		2,220 hp	QSK50-G4	25383751		
G162	Genset – Emergency	Cummins	300 kW	DQHAB-1527253	K150889886	Bldg. 703	20200102
	Engine – Diesel; DOM: 10/2015		470 hp	QSM11-G4NR3	35335608		
G163	Genset – Emergency	Cummins	20 kW	C20 D6	A170142502	Bldg. 1003	20200102
	Engine – Diesel; DOM: 2017	Kubota	36 hp	V2203M-BG-ET02	7GA3781		
G164	Genset – Emergency	Cummins	600 kW	DQCA-1995210	H190619133	**Bldgs. 1011/1131**	20200102
	Engine – Diesel; DOM: 06/2019		1,220 hp	QSK23-G7	85006244		
G166	Genset – Emergency	Cummins	125 kW	C125D6C-1870134	L180463376	Bldg. 93	20200102
	Engine – Diesel; DOM: 2018		208 hp	QSB5-G6 NR3	74421187		
G167	Genset – Emergency	Cummins	450 kW	DEFJ-1870133	I18046246	Bldg. B1210	20200102
	Engine – Diesel; DOM: 04/2021		755 hp	QSX15-G9	80126465		

EU	Description	Manufacturer	Rating	Model #	Serial #	Location	SCC
G168	Genset – Emergency	Cummins	750 kW	**DQCB*2110027**	F210936351	**Bldg. 1057**	20200102
	Engine – Diesel; DOM: 2021		**1,220 hp**	QSK23-G7	85009371		
G169	Genset – Emergency	Cummins	750 kW	**DQCB*2110027**	F210936352	**Bldg. 1061**	20200102
	Engine – Diesel: DOM: 2021		**1,220 hp**	QSK23-G7	85009381		
G170	Genset – Emergency	Cummins	800 kW	**DQCC*2120019**	F210939357	**Bldg. 1061**	20200102
	Engine – Diesel; DOM: 2021		**1,220 hp**	QSK23-G7	85008963		
G171	Genset – Emergency	Cummins	800 kW	**DQCC*2120019**	F210936353	**Bldg. 1057**	20200102
	Engine – Diesel; DOM: 2021		**1,220 hp**	QSK23-G7	85009372		
G172	Genset – Emergency	Multiquip	40 kW	DCA-70SSJU4i	7307063	Bldg. 625	20200102
	Engine – Diesel; DOM: 2014	John Deere	107 hp	4045HFG92	PE4045R094135		
G173[N]	Fire Pump	Clarke	97 kW	JU4H-UFADP0	SO183167P	Bldg. 3922	20200102
	Engine – Diesel; DOM: 2023	John Deere	130 hp	4045HFC28	PE4045N043478		

[N] New emission unit.
Bold = modified emission unit information.

Table II-E-5: Surface Coating Emission Units

EU	Description	Manufacturer	Model #	Serial #	Location	SCC
C001	Spray Booth; 20.0’ x 22.0’ x 62.5’ L	DeVilbis			Bldg. 230	40200101
C002	Spray Booth; 34’ W x 43’ L x 20’ H	Global Finishing Solutions	CDW-4218PDT-24-AR	91152B	Bldg. 1004	40200101
C003	Weather-Rite, Inc. Propane-Fired Spray Booth Heater; 2.916 MMBtu/hr	Weather-Rite	TOT221VT	53748-1	Bldg. 230	40201004
C004	Weather-Rite, Inc. Propane-Fired Spray Booth Heater; 2.916 MMBtu/hr	Weather-Rite	TOT221VT	53748-2	Bldg. 230	40201004

Table II-E-6: Miscellaneous Chemical Usage

EU	Description
M001	Source-wide Miscellaneous Chemical Usage

The following units or activities listed in in Table II-E-7 and Table II-E-8 are present at this source, but are deemed insignificant.

Table II-E-7: Insignificant Activities and Processes (Tanks/Loading Racks)

Building Number	Description	Capacity (gal)	Fuel	Throughput (gal/year)
Insignificant Jet Fuel Tanks				
121	AST	1,000	Jet Fuel	365,000

Building Number	Description	Capacity (gal)	Fuel	Throughput (gal/year)
121	AST	120	Jet Fuel	43,800
121	AST	250	Jet Fuel	91,255
121	AST	75,000	Jet Fuel	2,000,000
121	AST	26,496	Jet Fuel	2,000,000
121	AST	26,496	Jet Fuel	2,000,000
Insignificant Jet Fuel Loading Racks and Fuel Dispensing				
121	Loading Arms (one loading; one unloading)	NA	Jet Fuel	2,000,000
682	Loading Arms (one loading; one unloading)	NA	Jet Fuel	2,000,000
1011	Loading Arms (one loading; one unloading)	NA	Jet Fuel	500,000
Insignificant Waste Fuel Tanks				
255-2	AST	5,000	Jet Fuel	1,825,000
Insignificant Diesel Tanks				
64	AST	1,500	Diesel	547,500
83	AST	127	Diesel	46,355
85	AST	1,700	Diesel	620,500
89	AST	308	Diesel	112,420
93	AST	400	Diesel	146,000
93	AST	256	Diesel	93,440
104	AST	700	Diesel	255,500
120	AST	240	Diesel	87,600
120	AST	240	Diesel	87,600
121	AST	5,000	Diesel	150,000
121	AST	5,000	Diesel	150,000
121	AST	5,000	Diesel	1,825,000
121	AST	5,000	Diesel	1,825,000
222	AST	145	Diesel	52,925
279	AST	428	Diesel	156,220
279	AST	428	Diesel	156,220
279	AST	428	Diesel	156,220
279	AST	272	Diesel	99,280
279	AST	272	Diesel	99,280
279	AST	272	Diesel	99,280
279	AST	103	Diesel	37,595
279	AST	103	Diesel	37,595
279	AST	103	Diesel	37,595
625	AST	103	Diesel	37,595
703	AST	1,700	Diesel	620,500
707	AST	366	Diesel	133,590
718	AST	1,000	Diesel	365,000
718-1	AST	2,000	Diesel	730,000

Building Number	Description	Capacity (gal)	Fuel	Throughput (gal/year)
718-A	AST	4,000	Diesel	1,460,000
719	AST	240	Diesel	87,600
719	AST	240	Diesel	87,600
799	AST	350	Diesel	127,750
799	AST	350	Diesel	127,750
820	AST	650	Diesel	237,250
1000	AST	2,300	Diesel	839,500
1000	AST	50	Diesel	18,250
1001	AST	317	Diesel	115,705
1001	AST	317	Diesel	115,705
1001	AST	317	Diesel	115,705
1001	AST	500	Diesel	182,500
1003	AST	195	Diesel	71,175
1003	AST	195	Diesel	71,175
1004	AST	559	Diesel	204,035
1005	AST	1,808	Diesel	659,920
1005	AST	8,000	Diesel	2,920,000
1009	AST	1,575	Diesel	574,875
1011	AST	2,460	Diesel	897,900
1012	AST	10,000	Diesel	3,650,000
1019	AST	366	Diesel	133,590
1022	AST	600	Diesel	219,000
1033	AST	195	Diesel	71,175
1050	AST	145	Diesel	52,925
1052	AST	308	Diesel	112,420
1055	AST	4,615	Diesel	1,684,475
1057	AST	1,530	Diesel	558,450
1057	AST	1,530	Diesel	558,450
1061	AST	1,530	Diesel	558,450
1061	AST	1,530	Diesel	558,450
1068	AST	2,460	Diesel	897,900
1078	AST	500	Diesel	182,500
1109	AST	43	Diesel	15,695
1130	AST	1,280	Diesel	467,200
1130	AST	10,000	Diesel	3,650,000
1150	AST	1,161	Diesel	423,765
1210	AST	500	Diesel	182,500
1217	AST	145	Diesel	52,925
3922	AST	150	Diesel	54,750
3925	AST	140	Diesel	51,100
Insignificant Diesel Loading Racks and Fuel Dispensing				
661	Single Product Dispensing Nozzles (4)	NA	Diesel	1,000,000
692	Loading Arms (2 loading; 2 unloading)	NA	Diesel	150,000

Table II-E-8: Insignificant Activities (Abrasive Blasting)

Building Number	Description	Manufacturer	Model #	Serial #
227	Media Blasting Booth; 10.0' x 25" x 65"	Custom-Made		
227	Media Blasting Booth; 5.0' x 4.0' x 4.0'	Custom-Made		
791	Media Blasting Booth; 5.0' x 4.0' x 3.0'	Pauli Systems	RAM 35-ACGIH	11531

Table II-E-9: Insignificant Activities (Degreasers)

Building Number	Description	Manufacturer	Model #	Serial #
52	Parts Washing Unit; 25 Gallons	Spray Master	SM9400	19099187
115	Parts Washing Unit; 17.5 Gallons	Clarus	PCS-15	
225	Parts Washing Unit; 27.5 Gallons	Clarus	PCS-25	5569
279	Parts Washing Unit; 85 Gallons	Aladin	2085E	71533
1011	Parts Washing Unit; 30 Gallons	Smart washer	28	2106049
3953	Parts Washing Unit; 25 Gallons	Power Master-Kleen Tec	28-1	2145

Table II-E-10: Insignificant Activities (Woodworking)

Building Number	Description
231	Woodworking Shop; Cyclone\Fabric Filter; 99% control efficiency (formerly EU: H001)

Table II-E-11: Insignificant Activities (Fuel Cell Maintenance)

Building Number	Description
Various	Fuel Cell Maintenance (formally EU: L001)

III. EMISSIONS INFORMATION

A. APPLICABILITY EMISSIONS

Permitting applicability is determined by calculating the emissions for all proposed emission units using 8,760 hours of operation (except for emergency generators or fire pumps, which use 500 hours), any inherent controls, any inherent throughput limitations, and the emission factors provided by the manufacturer, by source test results, by EPA AP-42, or by other approved methods.

Applicability emissions include emissions from insignificant emission units and activities, but do not include fugitive emissions (except for categorical sources listed in AQR 12.2.2(j) or any other stationary source category that, as of August 7, 1980, is being regulated under Sections 111 or 112 of the Act).

For NSR purposes, Creech AFB and NTTR are evaluated as a single source. Table III-A-1 summarizes the applicability emissions for both facilities. NTTR applicability emissions are sourced from the new ATC permit issued on May 5, 2025.

Table III-A-1: Creech AFB and NTTR Applicability Emissions Summary (tons per year)

Source Category	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
Creech AFB EU Applicability Emissions								
Fuel Tanks and Loading Arms	0	0	0	0	0	26.34	2.42	0
External Combustion Units	1.47	1.47	25.28	15.61	0.15	2.07	0.15	26,343.35
Internal Combustion Units	2.53	2.53	86.88	13.56	0.72	4.67	0.52	8,128.14
Surface Coating	0	0	0	0	0	6.60	4.62	0
Miscellaneous Chemical Usage	0	0	0	0	0	5.00	2.50	0
Creech AFB Insignificant Activities Emissions								
Insignificant Fuel Tanks and Loading Arms	0	0	0	0	0	0.90	0.05	0
Abrasive Blasting	0.01	0.01	0	0	0	0	0	0
Degreasers	0	0	0	0	0	0.41	0	0
Woodworking	0.44	0.33	0	0	0	0	0.00	0
Fuel Cell Maintenace	0	0	0	0	0	0.01	0.01	0
Creech AFB Applicability Emissions								
Creech AFB Applicability Emissions	4.45	4.34	112.16	29.17	0.87	33.26	9.61	34,471.49
NTTR Applicability Emissions[2]								
NTTR Applicability Emissions	130.98	113.06	1,648.63	369.94	3.20	114.34	7.24	18,260.09
Source-Wide Applicability Emissions								
Source-wide Applicability Emissions	**135.43**	**117.40**	**1,760.79**	**399.11**	**4.07**	**147.60**	**16.85**	**52,731.58**

[1]Metric tons per year, CO_2e.
[2]Sourced from NTTR new ATC permit issued on May 5, 2025.

Applicability emission calculations are included in the attachments.

B. PTE

PTE is calculated to include any controls or limits, whether voluntarily proposed by the source or required. PTE does not include insignificant emission units and activities, but does include fugitive emissions.

Table III-B-1 summarizes the PTE by emission unit category for Creech AFB.

Table III-B-1. Creech AFB PTE Summary (tons per year)

Pollutants	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	GHG[1]
Fuel Tanks and Loading Arms	0	0	0	0	0	13.60	1.76	0
External Combustion Units	1.47	1.47	25.28	15.61	0.15	2.07	0.15	26,343.35
Internal Combustion Units	2.53	2.53	86.88	13.56	0.72	4.67	0.52	8,128.14
Surface Coating	0	0	0	0	0	6.60	4.62	0
Misc. Chemical Usage	0	0	0	0	0	5.00	2.50	0
Creech AFB PTE	**4.04**	**4.04**	**112.16**	**29.17**	**0.87**	**31.94**	**9.55**	**34,471.49**

[1]Metric tons of CO_2e.

Table III-B-2 shows PTE for Creech AFB, NTTR, and the source-wide PTE.

Table III-B-2: Source-wide PTE (tons per year)

Pollutant	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs	GHG[1]
Creech AFB PTE	4.04	4.04	112.16	29.17	0.87	31.94	9.55	34,471.49
NTTR PTE	16.33	8.09	98.15	46.91	0.17	8.95	0.22	12,728.55
Source-wide PTE	20.37	12.13	210.31	76.08	1.04	40.89	9.77	47,200.04
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25[1]	-
Major Stationary Source Thresholds (PSD)	250	250	250	250	250	250	10/25[1]	-
Major Stationary Source Threshold (Nonattainment)			50			50		

[1]Metric tons per year, CO_2e.
[2]Sourced from NTTR new ATC permit issued on May 5, 2025.

Individually, Creech AFB is a Title V source for NO_x. Because the source-wide (Creech AFB and NTTR combined) applicability emissions exceed major source thresholds for PM_{10}, $PM_{2.5}$, CO, VOCs and HAPs, Creech is classified as a synthetic minor source for those pollutants. Creech AFB is a minor source for SO_2 and greenhouse gases GHGs. PTE is summarized below in Tables III-B-3 through III-B-7 PTE emission calculations are included in the attachments.

Table III-B-3: Tanks/Loading Arms PTE (tons per year)

EU	Building Number	Description	Fuel	Capacity (gallons)	Throughput (gallons/year)	VOC PTE	HAP PTE
Tanks							
J001	687	Horizontal Fixed Roof AST/Rectangular	Gasoline	5,000	3,640,000	10.92	0.57
J002	688	Horizontal Fixed Roof AST/Rectangular	Gasoline	10,000			
Loading Arms							
J014	691	Loading Arms (one loading; one unloading)	Gasoline	N/A	500,000	2.68	1.19
Tanks/Loading Arms PTE						**13.60**	**1.76**

Table III-B-4: Boilers, Furnaces, and Booth Heaters PTE (tons per year)

EU	Condition	Propane Gal/yr	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC	HAP	GHG[1]
W001	8,760 hr/yr	143,607	0.05	0.05	0.93	0.54	0.01	0.07	0.01	910.63
W002	8,760 hr/yr	119,672	0.04	0.04	0.78	0.45	0.01	0.06	0.01	758.86
W003	8,760 hr/yr	191,475	0.07	0.07	0.11	0.72	0.01	0.10	0.01	1,214.18
W005	8,760 hr/yr	100,525	0.04	0.04	0.65	0.38	0.01	0.05	0.01	637.44
W006	8,760 hr/yr	125,416	0.04	0.04	0.82	0.47	0.01	0.06	0.01	795.28
W008	8,760 hr/yr	195,879	0.07	0.07	1.27	0.73	0.01	0.10	0.01	1,242.10
W009	8,760 hr/yr	103,397	0.04	0.04	0.67	0.39	0.01	0.05	0.01	655.65
W010	8,760 hr/yr	143,607	0.05	0.05	0.93	0.54	0.01	0.07	0.01	910.63
W011	8,760 hr/yr	143,607	0.05	0.05	0.93	0.54	0.01	0.07	0.01	910.63
W012	8,760 hr/yr	1,132,577	0.40	0.40	7.36	4.25	0.01	0.56	0.01	7,178.88
W013	8,760 hr/yr	956,240	0.34	0.34	6.22	3.59	0.01	0.48	0.01	6,065.59
W015	8,760 hr/yr	143,607	0.05	0.05	0.93	0.54	0.01	0.07	0.01	910.63
W016	8,760 hr/yr	95,738	0.03	0.03	0.05	0.36	0.01	0.05	0.01	607.09
C003	8,760 hr/yr	279,171	0.10	0.10	1.81	1.05	0.01	0.14	0.01	1,770.27
C004	8,760 hr/yr	279,171	0.10	0.10	1.81	1.05	0.01	0.14	0.01	1,770.27
External Combustion Unit PTE			**1.47**	**1.47**	**25.28**	**15.61**	**0.15**	**2.07**	**0.15**	**26,343.35**

[1]Metric tons, CO_2e.

Table III-B-5: Internal Combustion Units

EU	Rating	Condition[1]	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC	HAP	GHG[1]
G003	170 hp	500 hr/yr	0.09	0.09	1.32	0.28	0.01	0.11	0.01	48.88
G005	250 hp	500 hr/yr	0.01	0.01	0.41	0.05	0.02	0.01	0.01	71.88
G006	145 hp	500 hr/yr	0.01	0.01	0.19	0.04	0.01	0.01	0.01	41.69
G013	364 hp	500 hr/yr	0.20	0.20	2.82	0.61	0.01	0.23	0.01	104.65
G014	470 hp	500 hr/yr	0.01	0.01	0.67	0.02	0.01	0.02	0.01	135.13
G015	610 hp	500 hr/yr	0.11	0.11	3.66	0.84	0.01	0.11	0.01	176.90
G016	755 hp	500 hr/yr	0.02	0.02	1.80	0.12	0.01	0.12	0.01	218.95
G017	1,490 hp	500 hr/yr	0.10	0.10	3.26	0.38	0.01	0.07	0.01	432.10
G019	465 hp	500 hr/yr	0.26	0.26	3.60	0.78	0.01	0.29	0.01	133.69
G020	207 hp	500 hr/yr	0.11	0.11	1.60	0.35	0.01	0.13	0.01	59.51
G021	207 hp	500 hr/yr	0.11	0.11	1.60	0.35	0.01	0.13	0.01	59.51
G022	207 hp	500 hr/yr	0.11	0.11	1.60	0.35	0.01	0.13	0.01	59.51
G027	207 hp	500 hr/yr	0.06	0.06	0.78	0.26	0.01	0.02	0.01	59.51
G057	2,953 hp	500 hr/yr	0.03	0.03	9.44	0.62	0.18	0.15	0.01	856.37
G058	48 hp	500 hr/yr	0.03	0.03	0.37	0.08	0.01	0.03	0.01	13.80
G117	470 hp	500 hr/yr	0.01	0.01	0.67	0.02	0.01	0.02	0.01	135.13
G118	2,220 hp	500 hr/yr	0.07	0.07	5.28	1.09	0.01	0.28	0.01	643.80
G123	250 hp	500 hr/yr	0.01	0.01	0.41	0.05	0.02	0.01	0.01	71.88

EU	Rating	Condition[1]	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC	HAP	GHG[1]
G124	157 hp	500 hr/yr	0.01	0.01	0.24	0.07	0.01	0.10	0.01	45.07
G127	364 hp	500 hr/yr	0.03	0.03	0.60	0.52	0.01	0.23	0.01	104.65
G130	175 hp	500 hr/yr	0.10	0.10	1.36	0.29	0.01	0.11	0.01	50.31
G131	175 hp	500 hr/yr	0.10	0.10	1.36	0.29	0.01	0.11	0.01	50.31
G133	183 hp	500 hr/yr	0.10	0.10	1.42	0.31	0.01	0.12	0.01	52.61
G134	183 hp	500 hr/yr	0.10	0.10	1.42	0.31	0.01	0.12	0.01	52.61
G136	755 hp	500 hr/yr	0.05	0.05	1.62	0.37	0.01	0.04	0.01	218.95
G137	364 hp	500 hr/yr	0.03	0.03	0.60	0.52	0.01	0.23	0.01	104.65
G138	470 hp	500 hr/yr	0.01	0.01	0.67	0.02	0.01	0.02	0.01	135.13
G139	56 hp	500 hr/yr	0.03	0.03	0.43	0.09	0.01	0.04	0.01	16.10
G140	68 hp	500 hr/yr	0.04	0.04	0.53	0.11	0.01	0.04	0.01	19.55
G142	364 hp	500 hr/yr	0.01	0.01	1.22	0.05	0.01	0.02	0.01	104.65
G143	81 hp	500 hr/yr	0.01	0.01	0.18	0.02	0.01	0.02	0.01	23.29
G145	35 hp	500 hr/yr	0.02	0.02	0.27	0.06	0.01	0.02	0.01	10.06
G148	250 hp	500 hr/yr	0.01	0.01	0.28	0.07	0.02	0.01	0.01	71.88
G149	399 hp	500 hr/yr	0.02	0.02	0.59	0.38	0.01	0.03	0.01	114.71
G150	145 hp	500 hr/yr	0.01	0.01	0.23	0.03	0.01	0.01	0.01	41.69
G151	311 hp	500 hr/yr	0.02	0.02	0.45	0.14	0.01	0.02	0.01	89.41
G152	311 hp	500 hr/yr	0.02	0.02	0.45	0.14	0.01	0.02	0.01	89.41
G156	1,354 hp	500 hr/yr	0.02	0.02	3.25	0.26	0.01	0.24	0.01	392.66
G157	69 hp	500 hr/yr	0.01	0.01	0.13	0.06	0.01	0.04	0.01	19.84
G158	324 hp	500 hr/yr	0.03	0.03	0.54	0.35	0.01	0.20	0.01	93.15
G159	2,220 hp	500 hr/yr	0.07	0.07	5.28	1.09	0.01	0.28	0.01	643.80
G162	470 hp	500 hr/yr	0.01	0.01	0.67	0.02	0.01	0.02	0.01	135.13
G163	36 hp	500 hr/yr	0.01	0.01	0.04	0.01	0.01	0.01	0.01	10.36
G164	1,220 hp	500 hr/yr	0.05	0.05	2.89	0.27	0.01	0.22	0.01	353.80
G166	208 hp	500 hr/yr	0.11	0.11	1.61	0.35	0.01	0.13	0.01	59.80
G167	755 hp	500 hr/yr	0.01	0.01	2.14	0.17	0.01	0.03	0.01	218.95
G168	1,220 hp	500 hr/yr	0.03	0.03	3.95	0.19	0.01	0.08	0.01	353.80
G169	1,220 hp	500 hr/yr	0.03	0.03	3.95	0.19	0.01	0.08	0.01	353.80
G170	1,220 hp	500 hr/yr	0.03	0.03	4.37	0.22	0.01	0.07	0.01	353.80
G171	1,220 hp	500 hr/yr	0.03	0.03	4.37	0.22	0.01	0.07	0.01	353.80
G172	107 hp	500 hr/yr	0.01	0.01	0.11	0.01	0.01	0.01	0.01	30.14
G173	130 hp	500 hr/yr	0.01	0.01	0.18	0.07	0.01	0.01	0.01	37.38
Internal Combustion Unit PTE			**2.53**	**2.53**	**86.88**	**13.56**	**0.72**	**4.67**	**0.52**	**8,128.14**

[1]Metric tons, CO_2e.

Table III-B-6: Surface Coating (tons per year)

EU	Condition	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC	HAP	GHG[1]
C001	940 gal/yr	0	0	0	0	0	3.52	2.46	0
C002	822 gal/yr	0	0	0	0	0	3.08	2.15	0
C003	Emissions included with External Combustion PTE								
C004	Emissions included with External Combustion PTE								
Surface Coating PTE		**0**	**0**	**0**	**0**	**0**	**6.60**	**4.62**	**0**

[1]Metric tons, CO_2e

Table III-B-7: Miscellaneous Chemical Usage (tons per year)

EU	VOC	HAP
M001	5.0	2.5

C. EMISSIONS INCREASE

Table III-C-1 shows the source-wide emissions changes as a result of this permitting action. The proposed PTE included below lists the source-wide (combined Creech AFB and NTTR) PTE for this significance evaluation for comparison purposes because the previous Part 70 OP included both facilities.

Table III-C-1. Emissions Changes Calculation and Significance Evaluation (tons per year)

Affected EU	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	H_2S	Pb
Proposed PTE	20.37	12.13	210.31	76.08	1.04	40.89	0	0
Permitted PTE[1]	20.21	11.94	206.72	49.26	0.95	40.29	0	0
Δ Emissions	0.16	0.19	3.59	26.82	0.09	0.70	0	0
Minor NSR Significance Threshold	**7.5**	**5.0**	**20**	**50**	**20**	**20**	**5**	**0.6**
RACT analysis required	No	No	No	No	No	No	NA	NA

[1]Sourced from Source 473 Part 70 OP issued on June 12, 2023.

D. CONTROL ANALYSIS

As shown in Table III-C-1, the emissions changes associated with this permitting action do not exceed Minor NSR Significance Thresholds; therefore, a control analysis is not required. All existing control requirements established with previous permitting actions, and identified in the proposed renewal operating permit, remain in effect.

E. OPERATIONAL LIMITS

All existing operational limits remain in effect. The new boilers (EUs: W015 and W016) are not subject to any operational limits. The new fire pump (EU: G173) is subject to the existing operations limits for emergency engines in the Part 70 OP. Operational limits are summarized by emission unit category below.

Storage Tanks/Loading Arms Fuel Dispensing

1. The permittee to limit the combined throughput of all gasoline products for the two ASTs, located at Buildings 687 and 688, to 3,640,000 gallons in any consecutive 12-month period (EUs: J001 and J002).
2. The permittee is required to limit the throughput of the two gasoline loading arms at Building 691 to 500,000 gallons in any consecutive 12-month period (EU: J014).
3. The permittee is required to only store/dispense gasoline in each storage tank/fuel-dispensing unit listed in Tables 1-1 and 1-2 of the Part 70 OP.

External Combustion

1. The permittee is required to limit the operation of boilers/heaters that are rated less than 1 MMBtu/hr (EU: W012) to a total of 11.83 MMBtu/hr in any consecutive 12-months.
2. The permittee is required to limit the operation of furnaces/heaters that are rated less than 1 MMBtu/hr (EU: W013) to a total of 9.99 MMBtu/hr in any consecutive 12 months.

Internal Combustion

1. The permittee is required to limit the operation of the emergency generators for testing and maintenance purposes to 100 hours/year. The permittee may operate the emergency generators up to 50 hours/year for nonemergency situations, but those hours count towards the 100 hours provided for testing and maintenance. The emergency generators cannot be used for peak shavings or nonemergency demand response, or to generate income for a facility by supplying power to an electric grid or to otherwise supply power as part of a financial arrangement with another entity, except under certain circumstances specified in the permit (EUs: G003,G005, G006, G013, G014, G015, G016, G017, G019, G027, G057, G058, G117, G118, G123, G124, G127, G136 G137, G138, G139, G140, G142, G143, G145, G148, G149, G150, G156, G157, G158, G159, G162, G163, G164, G166, G167, G168, G169, G170, G171, and G172).
2. The permittee required to limit the operation of each diesel-fired fire pump (EUs: G020, G021, G022, G130, G131, G133, G134, G151, G152, and G173) for testing and maintenance purposes to 100 hours/year. The permittee may operate the fire pumps up to 50 hours/year for nonemergency situations, but those hours count towards the 100 hours provided for testing and maintenance.

Surface Coating

The permittee is required to limit the consumption of VOC and HAP containing paints, basecoats, primers, reducers, thinners, and solvents, etc. to 940 gallons per any consecutive 12-month period for EU: C001, and 822 gallons per any consecutive 12-month period for EU: C002. The consumption limits are based on a maximum VOC content of 7.49 lb/gal and a maximum HAP content of 5.24 lb/gal.

Miscellaneous Chemical Usage

The permittee is required to limit miscellaneous chemical usage so that actual emissions do not exceed the VOC and HAP PTE caps for EU: M001 (5.0 tons per year VOC, 2.5 tons per year HAP).

F. CONTROL TECHNOLOGY

All existing control requirements remain in effect.

The new boilers (EUs: W015 and W016) are subject to the following control requirements:

1. The permittee is required to operate the boilers with good combustion practices.
2. The permittee is required to only combust propane in the boilers.
3. The permittee is required to operate the boilers in accordance with the manufacturer's operations and maintenance (O&M) manual.

The new fire pump (EU: G173) is subject to the following control requirements:

1. The permittee is required to operate the fire pump with a turbocharger and aftercooler.
2. The permittee is required to only combust diesel fuel with a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35% by volume.
3. The permittee is required to operate and maintain the fire pump in accordance with the manufacturer's O&M manual.

G. MONITORING

All existing monitoring requirements remain in effect.

The new boilers (EUs: W015 and W016) are not subject to any monitoring requirements.

The new fire pump (EU: G173) is subject to the following monitoring requirements:

1. The permittee is required maintain a log of maintenance and testing activities that includes the date, the type of fuel consumed, and the start and stop time of the fire pump.
2. The permittee is required to operate the fire pump with a nonresettable hour meter and monitor operation during testing, maintenance and nonemergency operation. If the fire pump is used for an emergency, the permittee is required to monitor monthly operation and document the nature of the emergency.
3. The permittee is required to monitor the sulfur content and the cetane index or aromatic content of the fuel burned in the fire pump by retaining a copy of vendor fuel specifications.

H. PERFORMANCE TESTING

All performance testing requirements from the previous permit remain in effect. This permitting action does not trigger additional performance testing requirements. The new boilers (EUs: W015 and W016) and the new fire pump (EU: G173) are not subject to performance testing requirements.

IV. REGULATORY REVIEW

A. LOCAL REGULATORY REQUIREMENTS

DAQ has determined that the following public laws, statutes, and associated regulations are applicable:

1. NRS, Chapter 445B.

2. Applicable AQRs listed in Table IV-A-1.

Table IV-A-1: Applicable Clark County AQRs

Citation	Title
AQR 00	“Definitions”
AQR 02	“Air Pollution Control Board”
AQR 04	“Control Officer”
AQR 05	“Interference with Control Officer”
AQR 08	“Persons Liable for Penalties – Punishment: Defense”
AQR 09	“Civil Penalties”
AQR 12.0	“Applicability and General Requirements”
AQR 12.2	“Permit Requirements for Major Sources in Attainment Areas”
AQR 12.4	“Authority to Construct Application and Permit Requirements for Part 70 Sources”
AQR 12.5	“Part 70 Operating Permit Requirements”
AQR 12.6	“Confidentiality”
AQR 12.7	“Emission Reduction Credits”
AQR 12.9	“Annual Emissions Inventory Requirement”
AQR 12.10	“Continuous Monitoring Requirements for Stationary Sources”
AQR 12.12	“Transfer of Permit”
AQR 12.13	“Posting of Permit”
AQR 13.2(b)(1)	“Subpart A - General Provisions”
AQR 13.2(b)(82)	“Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”
AQR 13.2(b)(106)	“Subpart CCCCCC - National Emissions Standards for Hazardous Air Pollutants for Gasoline Dispensing Facilities”
AQR 14.1(b)(1)	“Subpart A – General Provisions”
AQR 14.1(b)(82)	“Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines”
AQR 18	“Permit and Technical Service Fees”
AQR 25	“Affirmative Defense for Excess Emissions due to Malfunctions, Startup, and Shutdown”
AQR 26	“Emission of Visible Air Contaminants”
AQR 28	“Fuel Burning Equipment”
AQR 40	“Prohibitions of Nuisance Conditions”
AQR 41	“Fugitive Dust”, AQR 41.1.2 only
AQR 42	“Open Burning”
AQR 43	“Odors in the Ambient Air”
AQR 70	“Emergency Procedures”
AQR 80	“Circumvention”
AQR 81	“Provisions of Regulations Severable”

B. FEDERALLY APPLICABLE REGULATIONS

40 CFR Part 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES:

Subpart A— General Provisions

40 CFR Part 60.7-Notification and record keeping

Discussion: This regulation requires notification to Air Quality of modifications, opacity testing, records of malfunctions of process equipment and/or continuous monitoring device, and performance test data. These requirements are found in the Part 70 OP in 4.1. Air Quality requires records to be maintained for five years, a more stringent requirement than the two (2) years required by 40 CFR Part 60.7.

40 CFR Part 60.8 - Performance tests

Discussion: These requirements are found in the Part 70 OP in Section 3.1. Notice of intent to test, the applicable test methods, acceptable test method operating conditions, and the requirement for three runs are outlined in this regulation. Air Quality requirements for initial performance testing are in accordance with CFR Part 60.8. Air Quality also requires periodic performance testing for compliance with the initial performance testing operating parameters.

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

40 CFR Part 60.4200 – Applicability and designation of affected facility

Discussion: EUs: G005, G006, G014, G016, G017, G027, G057, G117, G118, G123, G124, G127, G130, G131, G133, G134, G136 G137, G138, G140, G142, G143, G145, G148, G149, G150, G151, G152, G156, G157, G158, G159, G162, G163, G164, G166, G167, G168, G169, G170, G171, G172, and G173 are subject to this applicable subpart.

This source has provided the certifications for the continuous-duty diesel engines listed in the above paragraph that demonstrates compliance with 40 CFR Part 60, Subpart IIII.

The continuous-duty diesel engines have demonstrated compliance with the emission standards set forth in 40 CFR 89.112 for new nonroad IC engines for the same model year and maximum engine power. The emission standards are provided in Table IV-B-1 and Table IV-B-2:

Table IV-B-1: Emission Standards for Emergency Diesel Engines (g/kW-hr)

EU	Engine Power	Year	NMHC + NO_x	CO	PM	HC
G005	250 hp	2008	4.0	3.5	0.20	N/A
G006	145 hp	2009	4.0	5.0	0.30	N/A
G014	470 hp	2007	4.0	3.5	0.20	N/A
G016	755 hp	2007	6.4	3.5	0.20	N/A
G017	1,490 hp	2010	6.4	3.5	0.20	N/A
G027	207 hp	2006	4.0	3.5	0.20	N/A

EU	Engine Power	Year	NMHC + NO_x	CO	PM	HC
G057	2,953 hp	2007	6.4	3.5	0.20	N/A
G117	470 hp	2009	4.0	3.5	0.20	N/A
G118	2,220 hp	2010	6.4	3.5	0.20	N/A
G123	250 hp	2010	4.0	3.5	0.20	N/A
G124	157 hp	2010	4.0	5.0	0.30	N/A
G127	364 hp	2007	4.0	3.5	0.20	N/A
G136	755 hp	2010	6.4	3.5	0.20	N/A
G137	364 hp	2008	4.0	3.5	0.20	N/A
G138	470 hp	2008	4.0	3.5	0.20	N/A
G142	364 hp	2006	4.0	3.5	0.20	N/A
G143	81hp	2007	7.5	5.0	0.40	N/A
G148	250 hp	2011	4.0	3.5	0.20	N/A
G149	399 hp	2011	4.0	3.5	0.20	N/A
G150	145 hp	2012	4.0	5.0	0.30	N/A
G156	1,354 hp	2013	6.4	3.5	0.20	N/A
G157	69 hp	2012	4.7	5.0	0.30	N/A
G158	324 hp	2013	4.0	3.5	0.20	N/A
G159	2,220 hp	2012	6.4	3.5	0.20	N/A
G162	470 hp	2015	4.0	3.5	0.20	N/A
G163	36 hp	2017	7.5	5.5	0.60	N/A
G164	1,220 hp	2019	6.4	3.5	0.20	N/A
G166	208 hp	2018	4.0	5.0	0.30	N/A
G167	755 hp	2020	6.4	3.5	0.20	N/A
G168	1,100 hp	2021	6.4	3.5	0.20	N/A
G169	1,100 hp	2021	6.4	3.5	0.20	N/A
G170	1,183 hp	2021	6.4	3.5	0.20	N/A
G171	1,183 hp	2021	6.4	3.5	0.20	N/A
G172	107 hp	2014	3.4	5.0	0.02	0.19

Table IV-B-2: Emission Standards for Diesel-Powered Fire Pumps (g/hp-hr)

EU	Engine Power	Year	NMHC + NO_x	CO	PM
G130	175	2008	7.8	2.6	0.40
G131	175	2008	7.8	2.6	0.40
G133	183	2007	7.8	2.6	0.40
G134	183	2007	7.8	2.6	0.40
G151	311	2010	3.0		0.15
G152	311	2010	3.0		0.15
G173	133 hp	2023	4.0	5.0	0.30

The continuous-duty diesel engines at this source are subject to 40 CFR Part 60, Subpart IIII, and so must meet the fuel requirements referenced therein from 40 CFR Subpart I, §80.510(b) for nonroad diesel fuel. The source must purchase diesel fuel that meets the per-gallon standard of 15 ppm maximum sulfur content, a minimum cetane index of 40 or

a maximum aromatic content of 35 volume percent. As all refiners and importers of non-road diesel fuel are also subject to these federal standards pursuant to 40 CFR §80.510, it is reasonable to assume the operators of the engines have very little opportunity, if any, to acquire fuel that violates these standards. Therefore, the permittee is required by the operating permit to monitor or keep records of the sulfur content, cetane index, or aromatic content of the diesel fuel used in their continuous-duty diesel engine(s).

40 CFR Part 60.4219 – Reporting and recordkeeping requirements.

Discussion: As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in Subpart A of this part.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

40 CFR PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES:

Subpart A—General Provisions

40 CFR Part 63.4 – Prohibited activities and circumvention

Discussion: This prohibition is addressed in the Part 70 OP. This is also local rule AQR Section 80.1.

Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR Part 63.6585 – Am I subject to this subpart?

Discussion: Creech AFB has emergency engines/fire pumps (EUs: G003, G013, G015, G019, G020, G021, G022, G026, G028, G058, G139, G140, G145) which are subject to this subpart.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

Each engine/fire pump at this source is subject to 40 CFR 63, Subpart ZZZZ, and so must meet the fuel requirements referenced therein from 40 CFR Subpart I, §80.510(b) for nonroad diesel fuel. The permittee must purchase diesel fuel that meets the per-gallon standard of 15 ppm maximum sulfur content, a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. The permittee is required to monitor the sulfur content, cetane index, or aromatic content of the diesel fuel used in each diesel-fired engine/fire pump by retaining a copy of vendor fuel specifications.

40 CFR Part 63.6640—How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

Discussion: The permittee is required to maintain each emergency engine/fire pump as follows:

- Change oil and filter every 500 hours of operation or annually, whichever comes first;
- Inspect air cleaner every 1000 hours of operation or annually, whichever comes first;
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first;
- Follow manufacturer's operation and maintenance instructions; or implement a maintenance plan which must provide, to the extent practicable, for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Subpart CCCCCC—Gasoline Dispensing Facilities

40 CFR 63.11111 – Applicability

Discussion: This section defines the various requirements for automotive and aviation gasoline dispensing facilities.

40 CFR 63.11112 – Affected Emission Units

Discussion: This subpart applies to gasoline storage tanks (EUs: J001 and J002) and associated equipment components in vapor or liquid gasoline service (EU: J014) at new, reconstructed, or existing GDO. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at the GDO are also included. The equipment used for the refueling of motor vehicles is not covered by this subpart.

40 CFR 63.11113 – Compliance Dates

Discussion: This section establishes the dates for which all existing, reconstructed, and new affected sources must comply with the requirements of this subsection.

40 CFR 63.11115 – General Duties for Minimizing Emissions

Discussion: The permittee shall, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

40 CFR 63.11116 – Requirements for Facilities with Monthly Throughputs of less than 10,000 Gallons

Discussion: This section addresses the means by which gasoline shall be handled to minimize vapor releases to the atmosphere. All pertinent requirements are contained in the Part 70 OP.

40 CFR 63.11117 – Requirements for Facilities with Monthly Throughputs of 10,000 Gallons or more

Discussion: This section addresses the means by which gasoline shall be handled to minimize vapor releases to the atmosphere. All pertinent requirements are contained in the Part 70 OP.

40 CFR 63.11118 – Requirements for Facilities with Monthly Throughputs of 100,000 gallons or more

Discussion: This section addresses the means by which gasoline shall be handled to minimize vapor releases to the atmosphere. All pertinent requirements are contained in the Part 70 OP.

40 CFR 63.11120 – Testing and Monitoring Requirements

Discussion: All applicable testing and monitoring requirements, from this subsection, are addressed in the Part 70 OP.

40 CFR 63.11124 – Notification Requirements

Discussion: All applicable notification requirements are addressed in the part 70 OP.

40 CFR 63.11125 – Recordkeeping Requirements

Discussion: All applicable notification requirements are addressed in the part 70 OP.

40 CFR 63.11126 – Reporting Requirements

Discussion: All applicable notification requirements are addressed in the part 70 OP.

40 CFR 63.11130 – Enforcement

Discussion: This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart.

40 CFR Part 64—Compliance Assurance Monitoring

Discussion: CAM is not applicable to this source.

V. COMPLIANCE

A. COMPLIANCE CERTIFICATION

Recordkeeping requirements are to be kept for all limitations specified in the permit.

1. Reporting Requirements

a. Requirements for compliance certification under AQR 12.5.2.8:

i. Regardless of the date of issuance of this Part 70 OP, the schedule for the submittal of reports to DAQ shall be that in Table V-A-1.

Table V-A-1: Reporting Schedule

Required Report	Applicable Period	Due Date
Semiannual Report for 1st half of the year.	January, February, March, April, May, June	July 30th each year[1]
Semiannual Report for 2nd half of the year. Any additional annual records required.	July, August, September, October, November, December	January 30th each year[1]
Annual Compliance Certification	Calendar year	January 30th each year[1]
Annual Emission Inventory Report	Calendar year	March 31st each year[1]
Annual Emission Statement[2]	Calendar year	March 31st each year[1]
Excess Emission Notification	As required	Within 24 hours of the onset of the event
Excess Emission Report	As required	As soon as practicable but not to exceed 72 hours from notification
Deviation Report	As required	Along with semiannual reports[1]
Excess Emissions that Pose a Potential Imminent and Substantial Danger	As required	Within 12 hours of the permittee learns of the event
Performance Testing Protocol	As required	No less than 45 days, but no more than 90 days, before the anticipated test date[1]
Performance Testing	As required	Within 60 days from the end of the test[1]

[1]If the due date falls on a Friday, Saturday, Sunday or a Federal or Nevada holiday, then the submittal is due on the next regularly scheduled business day.
[2]Required only for stationary sources that emit 25 tons or more of NO_x and/or 25 tons or more of VOCs during a calendar year.

ii. A statement of methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods.

iii. A schedule for submission of compliance certifications during the permit term.

iv. A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.

B. SUMMARY OF MONITORING FOR COMPLIANCE

Table V-B-1: Compliance Monitoring

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 0	Definitions	Applicable – Creech AFB will comply with all applicable definitions as they apply.	Creech AFB will meet all applicable test methods should new definitions apply.	Creech AFB complies with applicable requirements.
AQR 4	Control Officer	Applicable – The Control Officer or his representative may enter into Creech AFB property, with or without prior notice, at any reasonable time for purpose of establishing compliance.	Creech AFB will allow Control Officer to enter Station property as required.	Creech AFB complies with applicable requirements.
AQR 5	Interference with Control Officer	Applicable – Creech AFB shall not hinder, obstruct, delay, resist, or interfere with the Control Officer.	Creech AFB will allow Control Officer to operate as needed.	Creech AFB complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 8	Persons Liable for Penalties	Applicable – Creech AFB and employees will be individually and collectively liable to any penalty or punishment from Air Quality.	Creech AFB will adhere to the rules stipulated in applicable AQR.	Creech AFB complies with applicable requirements.
AQR 9	Civil Penalties	Applicable – The rule stipulates penalties for AQR violations.	Creech AFB will adhere to the rules stipulated in applicable AQR.	Creech AFB complies with applicable requirements.
AQR 12.0	Applicability, General Requirements and Transition	Applicable – Creech AFB as a whole is not subject to these requirements. Rule outlines source applicability, requirements for a source to obtain a permit and transition for sources that received a permit prior to rulemaking.	Creech AFB applied for and received ATC permits for Air Quality prior to commercial operation. Creech AFB will comply with the requirements of the ATCs.	Creech AFB complies with applicable requirements.
AQR 12.1	Permit Requirements for Minor Sources	Not Applicable.	Creech AFB applied for and received ATC permits for Air Quality prior to commercial operation. Creech AFB will comply with the requirements of the ATCs.	Creech AFB complies with applicable requirements.
AQR 12.2	Permit Requirements for Major Sources in Attainment Areas (PSD)	Not Applicable.	Not Applicable.	Not Applicable.
AQR 12.3	Permit Requirements for Major Sources in Nonattainment Areas	Not Applicable.	Not Applicable.	Not Applicable.
AQR 12.4	ATC application and Permit Requirements for Part 70 Sources	Applicable – Creech AFB applied for an ATC from Air Quality.	Creech AFB applied for, and received, ATC permits from Air Quality. Creech AFB shall comply with the requirements for ATCs.	Creech AFB complies with applicable requirements.
AQR 12.5	Part 70 OP Requirements	Applicable – Creech AFB as a whole is applicable. Renewal applications are due 6 to 18 months prior to expiration. Revision applications will be submitted within 12 months of commencing operation of a new emission unit.	Creech AFB complies with the requirements for Title V permits outlined in this AQR and with the current ATC.	Creech AFB complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 12.9	Annual Emissions Inventory	Applicable – Creech AFB shall complete and submit an annual emissions inventory.	Annual emission inventories shall be submitted by March 31 each year.	Creech AFB complies with applicable requirements.
AQR 12.10	Continuous Monitoring Requirements	Not Applicable.	Not Applicable.	Not Applicable.
AQR 13.2(b)(1) Subpart A	MACT – General Provisions	Applicable – Creech AFB emits hazardous air pollutants.	Creech AFB complies with the applicable requirements of 40 CFR Part 61 and Part 63.	Creech AFB complies with applicable requirements.
AQR 13.2(b)(82) Subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants – Stationary Reciprocating Internal Combustion Engines	Applicable – as of May 3, 2013, for the affected units in this permit.	Applicable compliance, monitoring, recordkeeping, and reporting requirements.	Creech AFB complies with applicable requirements.
AQR 13.2(106) Subpart CCCCCC	National Emission Standard for Hazardous Air Pollutants – Gasoline Dispensing Facilities	Applicable –Creech AFB is subject to this regulation.	Applicable compliance, monitoring, recordkeeping, and reporting requirements.	Creech AFB complies with applicable requirements.
AQR 14.1(b)(1) Subpart A	NSPS – General Provisions	Applicable – Creech AFB is an affected source under the regulations. AQR Section 14 is locally enforceable; however, the NSPS standards they reference are federally enforceable.	Applicable monitoring, recordkeeping and reporting requirements.	Creech AFB complies with applicable requirements.
AQR 14.1(b)(80) Subpart IIII	NSPS – Standards of Performance for Stationary Reciprocating Internal Combustion Engines	Applicable –Creech AFB is subject to this regulation.	Creech AFB has met the required certification for these engines.	Creech AFB complies with applicable requirements.
AQR 18	Permit and Technical Service Fees	Applicable – Creech AFB will be required to pay all required/applicable permit and technical service fees.	Creech AFB is required to pay all required/applicable permit and technical service fees.	Creech AFB complies with applicable requirements.
AQR 21	Acid Rain Permits	Not Applicable.	Not Applicable.	Not Applicable.
AQR 22	Acid Rain Continuous Emission Monitoring	Not Applicable.	Not Applicable.	Not Applicable.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 25	Upset/Breakdown, Malfunctions	Applicable – Any upset, breakdown, emergency condition, or malfunction which causes emissions of regulated air pollutants in excess of any permit limits shall be reported to Control Officer. Section 25.1 is locally and federally enforceable.	Any upset, breakdown, emergency condition, or malfunction in which emissions exceed any permit limit shall be reported to the Control Officer within twenty (24) hours of the time that the permittee learns of the event.	Creech AFB complies with applicable requirements.
AQR 26	Emissions of Visible Air Contaminants	Applicable – Opacity for the Creech AFB combustion turbines must not exceed 20 percent for more than 6 consecutive minutes.	Compliance determined by EPA Method 9.	Creech AFB complies with applicable requirements.
AQR 27	Particulate Matter from Process Weight Rate	Applicable – Creech AFB emission units are required to meet the maximum process weight rate based emission limit based on maximum design and rate of equipment.	Compliance determined by meeting maximum particulate matter discharge rate based on process rate.	Creech AFB complies with applicable requirements.
AQR 28	Fuel Burning Equipment	Applicable – The PM emission rate for the combustion the turbines is well below those established based on Section 28 requirements.	Maximum allowable PM emission rate determined from equation in Section 28.	Creech AFB complies with applicable requirements.
AQR 40	Prohibition of Nuisance Conditions	Applicable – No person shall cause, suffer or allow the discharge from any source whatsoever such quantities of air contaminants or other material which cause a nuisance. Section 40 is locally enforceable only.	Creech AFB air contaminant emissions controlled by pollution control devices or good combustion in order not to cause a nuisance.	Creech AFB complies with applicable requirements.
AQR 41	Fugitive Dust	Applicable – Creech AFB shall take necessary actions to abate fugitive dust from becoming airborne.	Creech AFB utilizes appropriate best practices to not allow airborne fugitive dust.	Creech AFB complies with applicable requirements.
AQR 42	Open Burning	Applicable – In event Creech AFB burns combustible material in any open areas, such burning activity will have been approved by Control Officer in advance. Section 42 is a locally enforceable rule only.	Creech AFB will contact the Air Quality and obtain approval in advance for applicable burning activities as identified in the rule.	Creech AFB complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 43	Odors in the Ambient Air	Applicable – An odor occurrence is a violation if the Control Officer is able to detect the odor twice within a period of an hour, if the odor causes a nuisance, and if the detection of odors is separated by at least fifteen minutes. Section 43 is a locally enforceable rule only.	Creech AFB will not operate its source in a manner which will cause odors.	Creech AFB complies with applicable requirements.
AQR 70.4	Emergency Procedures	Applicable – Creech AFB submitted an emergency standby plan for reducing or eliminating air pollutant emissions in the Section 12.5 OP Application.	Creech AFB submitted an emergency standby plan and received the Section 12.5 OP.	Creech AFB complies with applicable requirements.
AQR 80	Circumvention	Applicable – Creech AFB shall not conceal emissions in any way.	Creech AFB will disclose all emissions as required by state and federal regulations.	Creech AFB complies with applicable requirements.
NRS Ch. 445B	Nevada Revised Statutes, Air pollution	Applicable – Creech AFB shall comply with applicable regulations.	Creech AFB complies with applicable regulations.	Creech AFB complies with applicable requirements.
40 CFR Part 52.21	Prevention of Significant Deterioration	Applicable – Creech AFB is a minor source for PSD.	Creech AFB complies with the regulations of the Section.	Creech AFB complies with applicable requirements.
40 CFR Part 52.1470	State Implementation Plan Rules	Applicable – Creech AFB is subject to the Nevada SIP.	Creech AFB shall continue to comply with the federally enforceable monitoring, testing, recordkeeping, and reporting requirements stipulated in the SIP.	Creech AFB complies with applicable requirements.
40 CFR Part 60 Subpart A	Standards of Performance for New Stationary Sources – General provisions	Applicable – Creech AFB is an affected facility. Therefore, Subpart A provisions are applicable.	Creech AFB shall continue to adhere to applicable monitoring, testing, recordkeeping, and reporting regulations.	Creech AFB complies with applicable requirements.
40 CFR Part 60 Subpart IIII	Standards of Performance for	Applicable – Creech AFB is subject to this regulation.	Creech AFB shall continue to adhere to applicable monitoring, testing, recordkeeping, and reporting regulations.	Creech AFB complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR Part 63 Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	Applicable – The continuous-duty generators/fire pump is subject to this subpart.	Creech AFB shall continue to adhere to the applicable emission limitations, operating and maintenance requirements, recordkeeping, reporting, and general provisions.	Creech AFB complies with applicable requirements.
40 CFR Part 63 Subpart CCCCCC	National Emission Standard for Hazardous Air Pollutants – Gasoline Dispensing Facilities	Applicable –Creech AFB is subject to this regulation.	Creech AFB shall continue to adhere to the applicable emission limitations, operating and maintenance requirements, recordkeeping, reporting, and general provisions.	Creech AFB complies with applicable requirements.
40 CFR Part 64	Compliance Assurance Monitoring	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR Part 68	Chemical Accident Prevention Provisions	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR Part 70	Federally Mandated OPs	Applicable – The regulations provide for the establishment of State air quality permitting systems consistent with the requirements of Title V of the Clean Air Act.	Creech AFB complies with this regulation by maintaining an updated Title V federal operating permit.	Creech AFB complies with applicable requirements.
40 CFR Part 72	Acid Rain Permit Regulations	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR Part 73	Acid Rain Sulfur Dioxide Allowance System	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR Part 75	Acid Rain Continuous Emission Monitoring	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR Part 82	Protection of Stratospheric Ozone	Applicable – Creech AFB is subject to the applicable rules regarding protection of stratospheric ozone.	Creech AFB does not use or sell a substitute material for a device designated to use a CFC or HCFC and keeps records applicable to the rule onsite.	Creech AFB complies with applicable requirements.

VI. EMISSION REDUCTION CREDITS (OFFSETS)

The source has no federal offset requirements. *[AQR 12.7]*

VII. MODELING

A. INCREMENT ANALYSIS

Creech Air Force Base is a major source in Hydrographic Areas 160, 161, 168, 211 and 212. Since minor source baseline dates for NO_x (October 21, 1988) and SO_2 (June 29, 1979) have been triggered for HA 212, Prevention of Significant Deterioration (PSD) increment analysis is required. Permitted emission units include boilers, generators, fire pumps, mineral processing, surface coating and fuel dispensing.

DAQ modeled the source using AERMOD to track the increment consumption. Stack data submitted by the applicant was supplemented with information available for similar emission units. Five years (2011 to 2015) of meteorological data from the McCarran Station were used in the model. U.S. Geological Survey National Elevation Dataset terrain data were used to calculate elevations. Table VII-A-1 shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

Table VII-A-1: PSD Increment Consumption

Pollutant	Averaging Period	Source's PSD Increment Consumption (µg/m³)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO_2	3-hour	2.04[1]	628127	4020401
SO_2	24-hour	1.17[1]	628127	4020401
SO_2	Annual	0.39	628130	4020469
NO_X	Annual	2.87	628130	4020469

[1] Highest Second High Concentration.

VIII. ENVIRONMENTAL JUSTICE

An environmental justice analysis accomplishes two important policy objectives (1) it addresses the principle of fair treatment by further evaluating adverse and disproportionate impacts and identifying ways to prevent or mitigate such impacts; and (2) it addresses the principle of meaningful involvement by fostering enhanced community engagement in the permitting decision. Each analysis is conducted on a case-by-case basis and to what degree depends on the circumstances of any permit decision.

Creech AFB is located within the city limits of Indian Springs, Nevada. The nearest residences are located within 1 mile of the source. The source fulfills national security objectives and consists of emission units spread throughout the base in a large geographic area. The changes to the source included in this permitting action result in decreased PTE for regulated air pollutants. Therefore, DAQ has determined that this permitting action will not result in adverse effect on the nearby community or any underserved population.

IX. PERMIT SHIELD

The permittee has not requested a permit shield.

X. PUBLIC PARTICIPATION

Under AQR 12.5.2.17, the public participation requirement is triggered for renewal of the Part 70 OP.

XI. ATTACHMENTS

Attachment 1 – Fuel Tank/Loading Arm Emission Calculations

Table XI-1: Fuel Tank (EUs: J001 and J002) Applicability Emissions

VOC and HAP PTEs for GDOs with ORVR

Emission Factor (EF) Components	No control	Units		
UST submerged filling*	0.0073	lbs/gallon		
UST breathing & emptying or "working"	0.001	lbs/gallon		0.000598523
Refueling emission Factors (w/ ORVR)	0.0040	lbs/gallon		
Spillage	0.0007	lbs/gallon		
Total VOC EF	**0.0130**	**lbs/gallon**	**0.0000065**	tons/gallon

HAP Emission Factors

Constituent	% VOC	EF	Units		
Benzene	0.9	1.17E-04	lbs/gallon	**5.85E-08**	tons/gallon
Ethyl Benzene	0.1	1.30E-05	lbs/gallon	**6.5E-09**	tons/gallon
Hexane	1.6	2.08E-04	lbs/gallon	**1.04E-07**	tons/gallon
Toluene	1.3	1.69E-04	lbs/gallon	**8.45E-08**	tons/gallon
Trimethyl Pentane	0.8	1.04E-04	lbs/gallon	**5.2E-08**	tons/gallon
Xylenes	0.5	6.50E-05	lbs/gallon	**3.25E-08**	tons/gallon
Total	**5.2**	**0.000676**	**lbs/gallon**	**3.38E-07**	tons/gallon

HAP Speciation as a Percentage of VOC	
	Gasoline
Benzene	0.9
Ethyl Benzene	0.1
Hexane	1.6
Toluene	1.3
Trimethyl Pentane	0.8
Xylenes	0.5
Total (%)	**5.2**

	Throughput	EF	PTE	
VOC	3,640,000	0.0000065	23.66	**TPY**
HAP	3,640,000	3.38E-07	1.23	**TPY**

[1] HAP Fraction of VOC emissions for gasoline is based on '*Gasoline Marketing (Stage I and Stage II), Volume III: Chapter 11*', prepared by Eastern Research Group, Inc, Prepared for Emissions Inventory Improvement Program (EIIP), January 2001.

Table XI-2: Fuel Dispensing (EUs: J001 and J002) PTE

VOC and HAP PTEs for GDOs with ORVR

Emission Factor (EF) Components	Phase I @ 95 % control	Units		
UST balanced submerged filling	0.0003	lbs/gallon		
UST breathing & emptying or "working"	0.001	lbs/gallon		0.000598523
Refueling emission Factors	0.0040	lbs/gallon		
Spillage	0.0007	lbs/gallon		
Total VOC EF	**0.0060**	**lbs/gallon**	**0.000003**	tons/gallon

HAP Emission Factors

Constituent	% VOC	EF	Units		
Benzene	0.9	5.40E-05	lbs/gallon	**2.7E-08**	tons/gallon
Ethyl Benzene	0.1	6.00E-06	lbs/gallon	**3E-09**	tons/gallon
Hexane	1.6	9.60E-05	lbs/gallon	**4.8E-08**	tons/gallon
Toluene	1.3	7.80E-05	lbs/gallon	**3.9E-08**	tons/gallon
Trimethyl Pentane	0.8	4.80E-05	lbs/gallon	**2.4E-08**	tons/gallon
Xylenes	0.5	3.00E-05	lbs/gallon	**1.5E-08**	tons/gallon
Total	**5.2**	**0.000312**	**lbs/gallon**	**1.56E-07**	tons/gallon

HAP Speciation as a Percentage of VOC

	Gasoline
Benzene	0.9
Ethyl Benzene	0.1
Hexane	1.6
Toluene	1.3
Trimethyl Pentane	0.8
Xylenes	0.5
Total (%)	**5.2**

	Throughput	EF	PTE	
VOC	3,640,000	0.0000030	10.92	**TPY**
HAP	3,640,000	1.56E-07	0.57	**TPY**

[1] HAP Fraction of VOC emissions for gasoline is based on '*Gasoline Marketing (Stage I and Stage II), Volume III: Chapter 11*' , prepared by Eastern Research Group, Inc, Prepared for Emissions Inventory Improvement Program (EIIP), January 2001.

Table XI-3: Loading Arms PTE

Building Number	EU	Status	Description	Fuel	Saturation Factor[a]	Vapor Pressure (psia)[b]	Molecular Weight (lbs/lb-mol)	Temperature (°R)	Capture Efficiency	Recovery Rate	Throughput (gallons/year)	VOC PTE (tpy)	Total HAPs PTE (tpy)
691	J014	Existing	Loading Arms (one loading; one unloading)	Gasoline	0.6	12.744	60.0	534	0%	0%	500,000	2.68	1.19
											Total Fuel Loading PTE	**2.68**	**1.19**

Emissions from fuel loading operations result from displacement of fuel vapor by the liquid being loaded into the tanks. VOC emissions from fuel loading operations for the new fuel loading arm were estimated using the fuel specific characteristics obtained from the fuel SDSs and the methodology outlined in AP-42, Chapter 5, Section 5.2.2.1 Transportation and Marketing of Petroleum Liquids (EPA, 2008a) and Air Emissions Guide for Air Force Stationary Sources (Air Force Civil Engineer Center [AFCEC], 2018). VOC PTE calculated using equation 6-2 from the August 2018 Air Emissions Guide for Air Force Stationary Sources.

[a]Saturation Factor based on Submerged Loading, Dedicated Normal Service from Table 6-1 of the August 2018 Air Emissions Guide for Air Force Stationary Sources.

[b]Vapor pressures as stated on the fuel SDS, corrected for an average bulk fuel temperature of 534 °R.

[c]Molecular weight from Table 6-2 of the August 2018 Air Emissions Guide for Air Force Stationary Sources.

VOC PTE Calculation Equations
VOC EF, lb/gal = 0.01246 R-lb-mol/psia-gal × (Saturation Factor × True Vapor Pressure of Fuel, psia × Vapor Molecular Weight of Fuel, lb/lb-mol)/Temperature, R × (1-Capture Efficiency, %)
VOC PTE, tpy = VOC EF, lb/gal × Throughput, gal/yr × 1 ton/2,000 yr
Sample Calculations
EU J014 VOC EF, lb/gal = 0.01246 R-lb-mol/psia-gal × ((0.6 × 12.744 psia × 60 lb/lb-mol)/534 R) = 1.07E-02 lb/gal
EU J014 VOC tpy = 1.07E-02 lb/gal × 5000,000 gal/yr × 1 ton/2,000 lb = 2.68 tpy

HAPs EF and PTE calculated as the vapor weight percentage of HAPs in the fuel. HAPs speciation as stated in fuel SDS.

HAPs PTE Calculation Equations
HAPs EF, lb/gal = Total HAP Vapor Weight Percent, % × VOC EF, lb/gal
HAPs PTE, tpy = HAPs EF, lb/gal × Throughput, gal/yr × 1 ton/2,000 lb
Sample Calculations
EU J014 HAPs EF, lb/gal = 44.5% ×1.07E-02 lb/gal = 4.63E-03 lb/gal
EU J014 HAPs PTE, tpy = 4.635E-03 lb/gal × 500,000 gal/yr × 1 ton/2,000 lb = 1.19 tpy

Notes:
EU = emission unit
gal/yr = gallons per year
HAPs = hazardous air pollutants
lbs/lb-mol = pounds per pound mole
psia = pounds per square inch area
R = Rankine
tpy = tons per year
VOC = volatile organic compounds

Attachment 2 – External Combustion Emissions (New or Modified EUs)

Table XI-4: W015 PTE

EU#:	W001, W010, W011, W015			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0077	0.01	0.28	0.05
S/N:			PM2.5	0.0077	0.01	0.28	0.05
			NOx	0.1421	0.21	5.12	0.93
1.5	mmBtu/hr		CO	0.0820	0.12	2.95	0.54
24.0	hr/day		SO_2	0.0000	0.01	0.01	0.01
8760	hr/yr		VOC	0.0109	0.02	0.39	0.07
			HAP	3.02E-05	0.01	0.01	0.01
BACT:		%O2	Lead	7.31E-10	1.10E-09	2.63E-08	4.80E-09
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Propane						

Table XI-5: W016 PTE

EU#:	W016			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:	RBI				lb/hr	lb/day	ton/yr
Model:	Futera II 1000		PM10	0.0077	0.01	0.18	0.03
S/N:	TBD		PM2.5	0.0077	0.01	0.18	0.03
			NOx	0.0122	0.01	0.29	0.05
1.00	mmBtu/hr		CO	0.0820	0.08	1.97	0.36
24.0	hr/day		SO_2	0.0000	0.01	0.01	0.01
8760	hr/yr		VOC	0.0109	0.01	0.26	0.05
			HAP	3.02E-05	0.01	0.01	0.01
BACT:		%O2	Lead	7.31E-10	7.31E-10	1.75E-08	3.20E-09
10	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Propane						

Table XI-6: External Combustion GHG Emissions

EU	Rating (MMBtu/hr)	Hours/year	Gallons	GHG (tons/yr)[1]
W001	1.50	8760	143,607	910.63
W002	1.25	8760	119,672	758.86
W003	2.00	8760	191,475	1,214.18
W005	1.05	8760	100,525	637.44
W006	1.31	8760	125,416	795.28
W008	2.05	8760	195,879	1,243.92
W009	1.08	8760	103,397	656.87
W010	1.50	8760	143,607	910.63
W011	1.50	8760	143,607	910.63
W012	11.83	8760	1,132,577	7,181.85
W013	9.99	8760	956,240	6,064.80
W015	1.50	8760	143,607	910.63
W016	1.00	8760	95,738	607.09
C003	2.916	8760	279,171	1,770.27
C004	2.916	8760	279,171	1,770.27
External Combustion Applicability/PTE				**26,343.35**

[1] - CO_2 emission factor = 62.87 kg CO_2/MMBtu, sourced from 40 CFR 98, Table C-1 factor for propane and conversion factor of 2.20462 lb/kg.

Attachment 3 – Internal Combustion Emissions (New or Modified EUs)

Table XI-7: G173 PTE

						Emission Factor	Control	Potential Emissions		
EU#	G173		**Horsepower:**	130		(lb/hp-hr)	Efficiency	lb/hr	lb/day	ton/yr
Make:			**Hours/Day:**	24.0						
Model:			**Hours/Year**	500	**PM10**	2.79E-04	0.00%	0.04	0.87	0.01
S/N:					**NOx**	5.52E-03	0.00%	0.72	17.23	0.18
					CO	2.14E-03	0.00%	0.28	6.67	0.07
Manufacturer Guarantees					**SO_2**	1.21E-05	0.00%	0.01	0.04	0.01
PM10	0.17	g/kW-hr			**VOC**	2.47E-04	0.00%	0.03	0.77	0.01
NOx	3.36	g/kW-hr			**HAP**	2.71E-05	0.00%	0.01	0.08	0.01
CO	1.3	g/kW-hr			**GHG**	1.15E+00	0.00%	149.50	3588.00	37.38
SO_2		g/kW-hr								
VOC	0.15	g/kW-hr								
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)					

Table XI-8: G168 and G169 PTE

					Emission Factor	Control	Potential Emissions		
EU#	G168/G169	**Horsepower:**	1,220		(lb/hp-hr)	Efficiency	lb/hr	lb/day	ton/yr
Make:	Cummins	**Hours/Day:**	24.0	**PM10**	1.10E-04	0.00%	0.13	3.23	0.03
Model:	DQCB*2110027	**Hours/Year**	500	**NOx**	1.29E-02	0.00%	15.78	378.83	3.95
S/N:	Various			**CO**	6.25E-04	0.00%	0.76	18.29	0.19
Manufacturer Guarantees				**SO_2**	1.21E-05	0.00%	0.01	0.36	0.01
PM10	0.067	g/kW-hr		**VOC**	2.63E-04	0.00%	0.32	7.70	0.08
NOx	7.87	g/kW-hr		**HAP**	1.10E-05	0.00%	0.01	0.32	0.01
CO	0.38	g/kW-hr		**GHG**	1.16	0.00%	1415.2	33964.8	353.80
SO_2		lb/hp-hr							
VOC	0.16	g/kW-hr							
Engine Type:	Diesel			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)					

Table XI-9: G170 and G171 PTE

					Emission Factor	Control	Potential Emissions		
EU#	G170/G171	**Horsepower:**	1,220		(lb/hp-hr)	Efficiency	lb/hr	lb/day	ton/yr
Make:	Cummins	**Hours/Day:**	24.0	**PM10**	1.10E-04	0.00%	0.13	3.23	0.03
Model:	DQCC*2120019	**Hours/Year**	500	**NOx**	1.43E-02	0.00%	17.49	419.74	4.37
S/N:	Various			**CO**	7.23E-04	0.00%	0.88	21.18	0.22
Manufacturer Guarantee				**SO_2**	1.21E-05	0.00%	0.01	0.36	0.01
PM10	0.067	g/kW-hr		**VOC**	2.14E-04	0.00%	0.26	6.26	0.07
NOx	8.72	g/kW-hr		**HAP**	1.10E-05	0.00%	0.01	0.32	0.01
CO	0.44	g/kW-hr		**GHG**	1.16	0.00%	1415.2	33964.8	353.80
SO_2		g/hp-hr							
VOC	0.13	g/kW-hr							
Engine Type:	Diesel			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)					

Attachment 4 – Surface Coating Emissions

Table XI-10: Surface Coating Emissions

Building Number	EU	Status	Description	Coatings Usage[a] (gallons/year)	Solids Content[a] (lb/gallon)	VOC Content[a] (lb/gallon)	HAP Content[a] (lb/gallon)	Filter Control Efficiency	HVLP Transfer Efficiency	New VOC PTE (tpy)	New HAP PTE (tpy)
230	C001	Existing	Spray Booth	940	11.57	7.49	5.24	99%	65%	3.52	2.46
1004	C002	Existing	Spray Booth	822	11.57	7.49	5.24	99%	65%	3.08	2.15
230	C003	Existing	Booth Heater	Emissions included with External Combustion Source Category							
230	C004	Existing	Booth Heater	Emissions included with External Combustion Source Category							
							Total New PTE			**6.60**	**4.62**

[a]Coating usage, solids content, VOC content and HAP content conservatively reflect maximum potential values.

[b]Filter Control Efficiency listed is overall efficiency.

Notes:
% = percent
EU = emission unit
gallons/year = gallons per year
HAP = hazardous air pollutant
lb/gallon = pound per gallon
$PM_{2.5}$ = particulate matter with an aerodynamic diameter less than 2.5 microns
PM_{10}= particulate matter with an aerodynamic diameter less than 10 microns
PTE = potential to emit
tpy = tons per year
VOC = volatile organic compounds

Attachment 5 – Surface Coating Emissions

Table XI-11: Miscellaneous Chemical Usage (tons per year)

EU	VOC	HAP
M001	5.0	2.5

Attachment 6 – Insignificant Activity Emissions

Table XI-12: Abrasive Blasting Emissions (tons per year)

Building Number	EU	Status	Manufacturer	Model Number	Serial Number	Capacity	Abrasive Material (lb/hour)	Abrasive Material (lb/year)	Emission Factor[a] (lb/1000 lb)	New PM_{10} PTE (tpy)	New $PM_{2.5}$ PTE (tpy)
227	Insignificant	Existing	Custom-made	NA	Not Available	10.0' x 25" x 65"	50	10,000	0.69	0.003	0.003
227	Insignificant	Existing	Custom-made	NA	Not Available	5.0' x 4.0' x 4.0'	50	10,000	0.69	0.003	0.003
791	Insignificant	Existing	Pauli Systems	RAM 35-ACGIH	11531	5.0' x 4.0' x 3.0'	50	10,000	0.69	0.003	0.003
									New Insignificant Media Blasting Source Category PTE	**0.01**	**0.01**
									Insignificant Threshold (AQR Section 12.5.2.5[c])	**2.0**	**2.0**
									New Total Media Blasting Potential to Emit Above Insignificant Threshold?	**NO**	**NO**

[a] Compilation of Air Pollutant Emission Factors (AP-42), Volume 1: Stationary Point and Area Sources (EPA, 1996), Chapter 13, Section 2.6 Abrasive Blasting (EPA, 1997); Table 13.2.6-1 Particulate Emission Factors for Abrasive Blasting, Abrasive blasting of unspecified metal parts, controlled with a fabric filter.

[b] New Insignificant Media Blasting Source Category PTE may differ slightly due to rounding.

Notes:
AQR = Clark County Air Quality Regulation
EPA = U.S. Environmental Protection Agency
EU = emission unit
lb = pound(s)
lb/year = pound(s) per year
NA = not available
PM_{10} = particulate matter with an aerodynamic diameter less than 10 micrometers
$PM_{2.5}$ = particulate matter with an aerodynamic diameter less than 2.5 micrometers
PTE = potential to emit
tpy = ton(s) per year

Calculation Equations

Individual Insignificant Media Blasting EU PTE, tpy = Emission Factor, lb/1,000 lb x (Operating Limit, lb/year / 1,000 lb) x 1 ton/2,000 lb
Building 227 Insignificant Media Blasting PM10 PTE, tpy = 0.69 lb/1,000 lb x (10,000 lb/yr / 1,000) x 1 ton/2,000 lb = 3.45E-03 (rounded to 0.003)
New Insignificant Media Blasting Source Category PTE, tpy = Sum of Individual Insignificant Media Blasting EU PTEs, tpy

Table XI-13: Degreaser Emissions (tons per year)

Building Number	EU	Status	Manufacturer	Model Number	Serial Number	Capacity (gallons)	Consumption (gallons/year)[b]	VOC Content (lb/gallons)[b]	New VOC PTE (tpy)
52	Insignificant	Existing	Spray Master	SM9400	19099187	60	25	6.6	0.08
115	Insignificant	Existing	Clarus	PCS-15		Non-VOC solvent			0.00
225	Insignificant	Existing	Clarus	PCS-25	005569	27.5	25	6.6	0.08
~~225~~	~~Insignificant~~	~~Removed~~	~~CUDA~~	~~H20-2840~~	~~10434160-100212~~	~~Non-VOC solvent~~			~~0.00~~
279	Insignificant	Existing	Aladin Cleaning System	2085E	71533	85	25	6.6	0.08
1011	Insignificant	Existing	SmartWasher	8	2106049	30	25	6.6	0.08
3953	Insignificant	Existing	Power Master-Kleen Tec	**28-1**	02145	25	25	6.6	0.08
								New Insignificant Degreaser Source Category PTE	**0.41**
								Insignificant Threshold (AQR Section 12.5.2.5(c))	**2.0**
								Total Insignificant Degreaser PTE Above Insignificant Threshold?	**NO**

[a] New Insignificant Degreaser Source Category PTE may differ slightly due to rounding.

[b] Estimates 25 gallons of producet per year with a typical degreaser VOC content of 6.6 lb/gallon

Notes:
AQR = Clark County Air Quality Regulation
EU = emission unit
lb = pounds
PTE = potential to emit
TBD = to be determined
tpy = tons per year
VOC = volatile organic compounds

Calculation Equations

Individual Degreaser VOC PTE, tpy = Emission Factor, lb/gallons × Consumption, gallons/yr × 1 ton/2,000 lb
Building 52 Degreaser VOC PTE, tpy = 6.6 lb/gallons × 25 gallons/yr × 1 ton/2,000 lb = 0.08 tpy
New Insignificant Degreaser Source Category PTE, tpy = Sum of Individual Insignificant Degreaser EU PTEs, tpy

Table XI-14: Woodworking Emissions (tons per year)

Building Number	EU	Status	Number of Sanders	Number of Other Equipment	Operation (hours/year)	Control Device	Sander PM Emission Factor (lb/hour)[a]	Other Equipment PM Emission Factor (lb/hour)[a]	PM_{10} Fractional Concentration [b]	$PM_{2.5}$ Fractional Concentration [b]	Control Efficiency	New PM_{10} PTE (tpy)	New $PM_{2.5}$ PTE (tpy)
231	Insignificant (Historically EU H001)	Existing	2	6	8,760	Cyclone\ Fabric Filter	5	2	0.452	0.343	99.0%	0.44	0.33
											Total New PTE	**0.44**	**0.33**
											Insignificant Threshold (AQR Section 12.5.2.5(c))	**2.0**	**2.0**
											Total Insignificant Woodworking PTE Above Insignificant Threshold?	**NO**	**NO**

a PM emission factor = Mass of total sawdust produced - Mass of sawdust collected by the control device (lb/hr)

b Fractional Concentrations of Woodworking Dusts from Mike and Steve Smith, "Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds," South Coast Air Quality Management District, October 2006 and assumed a conservative 90% sawing and 10% sanding.

Notes:
% = percent
EU = emission unit
hours/year = hours per year
lb/hour = pounds per hour
PM = particulate matter
$PM_{2.5}$ = particulate matter less than 2.5 micrometers
PM_{10} = particulate matter less than 10 micrometers
PTE = potential to emit
tpy = tons per year

Table XI-15: Fuel Cell Maintenance Emissions (tons per year)

Building Number	EU[a]	Status	Aircraft Type	Fuel Type	Tank Volume (gallons)	HAP Concentrations[a] Benzene (%)	Toluene (%)	Naphthalene (%)	Total HAP (%)	New VOC PTE (tpy)	New HAP PTE (tpy)
N/A	Insignificant (historically EU L001)	Reclassified as Insignificant	MQ-9	Jet Fuel	564	N/A	N/A	0.04	4.00E-04	0.01	0.01
		Reclassified as Insignificant	MQ-1	Aviation Gasoline	100	0.25	5.50	NA	0.06	0.01	0.01
									Total New PTE	**0.02**	**0.02**
									Insignificant Threshold (AQR Section 12.5.2.5(c))	**2.0**	**0.25**
									Total Insignificant Fuel Cell Maintenance PTE Above Insignificant Threshold?	**NO**	**NO**

[a]HAP Concentrations are as shown on the fuel safety data sheets (SDSs).

Notes:
% = percent
AQR = Clark County Air Quality Regulation
EU = emission unit
HAP = hazardous air pollutant
N/A = not applicable
PTE = potential to emit
tpy = tons per year
VOC = volatile organic compound