APPENDIX C

AIR QUALITY

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Appendix C-1

Air Conformity Applicability Analysis

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C.1 AIR QUALITY

This appendix presents an overview of the Clean Air Act (CAA) and the relevant state (Oregon, Nevada, California) air quality regulations/standards. It also presents calculations, including the assumptions used for the air quality analyses presented in the Air Quality sections of this Environmental Assessment.

C.1.1 Air Quality Program Overview

To protect public health and welfare, the United States Environmental Protection Agency (USEPA) has developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for six "criteria" pollutants (based on health-related criteria) under the provisions of the CAA Amendments of 1970. There are two kinds of NAAQS: Primary and Secondary standards. Primary standards prescribe the maximum permissible concentration in the ambient air to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards prescribe the maximum concentration or level of air quality required to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings (40 Code of Federal Regulations [CFR] Part 50).

The CAA gives states the authority to establish air quality rules and regulations. These rules and regulations must be equivalent to, or more stringent than, the federal program. The Oregon Department of Environmental Quality (ODEQ) oversees the state's air pollution control program under the authority of the federal CAA and amendments, federal regulations, and state laws. Oregon has adopted the federal NAAQS (OAR 340-202-0050 through 340-202-0130). These standards are shown in **Table C-1**.

A portion of Juniper-Hart Military Operations Areas (MOAs) overlays Humboldt and Washoe Counties in northwestern Nevada which is part of the Northwest Air Quality Control Region (AQCR). The Nevada Division of Environmental Protection (NDEP) and the USEPA Region 9 have regulatory authority in this region. The NDEP has implemented ambient air quality standards that differ from the NAAQS for 8-hour carbon monoxide (above 5,000 feet [ft] above mean sea level [MSL]) and have established 24-hour sulfur dioxide standard (NAC 445B.22097). In addition, a very small portion (approximately 63 square miles) of the Juniper-Hart MOA overlays Modoc County in Northeast California. This region falls within the Modoc County Air Pollution Air Pollution Control District (MCAPCD), USEPA Region 9, and the Northeast Plateau AQCR. The MCAPCD has adopted the California Ambient Air Quality Standards that in some cases are more stringent than the NAAQS (Modoc County Rule 6.3); however, the NAAQS are used when making attainment and non-attainment determination as described below.

Government authorities operate and maintains an ambient air monitoring network that follows the USEPA protocols and quality assurance/control procedures. Based on measured ambient air pollutant concentrations, the USEPA designates areas of the United States as having air quality better than (attainment) the NAAQS, worse than (nonattainment) the NAAQS, and unclassifiable. The areas that cannot be classified (on the basis of available information) as meeting or not meeting the NAAQS for a particular pollutant are "unclassifiable" and are treated as attainment until proven otherwise. Attainment areas can be further classified as "maintenance" areas, which are areas previously classified as nonattainment but where air pollutant concentrations have been successfully reduced to below the standard. Maintenance areas are under special maintenance plans and must operate under some of the nonattainment area plans to ensure compliance with the NAAQS.

Section 176(c) (1) of the CAA contains legislation that ensures federal activities conform to relevant State Implementation Plans (SIPs) and thus do not hamper local efforts to control air pollution. Conformity to a SIP is defined as conformity to a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. As such, a general conformity analysis is required for areas of nonattainment or maintenance where a federal action is proposed.

The action can be shown to conform by demonstrating that the total direct and indirect emissions are below the *de minimis* levels (**Table C-2**), and/or showing that the proposed action emissions are within the state- or tribe-approved budget of the facility as part of the SIP or Tribal Implementation Plan (USEPA, 2010).

Table C-1
National Ambient Air Quality Standards

Pollutant	Standard Value[6]		Standard Type
Carbon Monoxide (CO)			
8-hour average	9 ppm	(10 mg/m^3)	Primary
1-hour average	35 ppm	(40 mg/m^3)	Primary
Nitrogen Dioxide (NO_2)			
Annual arithmetic mean	0.053 ppm	(100 µg/m^3)	Primary and Secondary
1-hour average[1]	0.100 ppm	(188 µg/m^3)	Primary
Ozone (O_3)			
8-hour average[2]	0.070 ppm	(137 µg/m^3)	Primary and Secondary
Lead (Pb)			
3-month average[3]		0.15 µg/m^3	Primary and Secondary
Particulate <10 Micrometers (PM_{10})			
24-hour average[4]		150 µg/m^3	Primary and Secondary
Particulate <2.5 Micrometers ($PM_{2.5}$)			
Annual arithmetic mean[4]		12 µg/m^3	Primary
Annual arithmetic mean[4]		15 µg/m^3	Secondary
24-hour average[4]		35 µg/m^3	Primary and Secondary
Sulfur Dioxide (SO_2)			
1-hour average[5]	0.075 ppm	(196 µg/m^3)	Primary
3-hour average[5]	0.5 ppm	(1,300 µg/m^3)	Secondary

Source: USEPA, 2016

Notes:
1 In February 2010, the USEPA established a new 1-hour standard for NO_2 at a level of 0.100 ppm, based on the 3-year average of the 98th percentile of the yearly distribution concentration, to supplement the then-existing annual standard.
2 In October 2015, the USEPA revised the level of the 8-hour standard to 0.070 ppm, based on the annual 4th highest daily maximum concentration, averaged over 3 years; the regulation became effective on 28 December 2015. The previous (2008) standard of 0.075 ppm remains in effect for some areas. A 1-hour standard no longer exists.
3 In November 2008, USEPA revised the primary lead standard to 0.15 µg/m^3. USEPA revised the averaging time to a rolling 3-month average.
4 In October 2006, USEPA revised the level of the 24-hour $PM_{2.5}$ standard to 35 µg/m^3 and retained the level of the annual $PM_{2.5}$ standard at 15 µg/m^3. In 2012, USEPA split standards for primary and secondary annual $PM_{2.5}$. All are averaged over 3 years, with the 24-hour average determined at the 98th percentile for the 24-hour standard. USEPA retained the 24-hour primary standard and revoked the annual primary standard for PM_{10}.
5 In 2012, the USEPA retained a secondary 3-hour standard, which is not to be exceeded more than once per year. In June 2010, USEPA established a new 1-hour SO_2 standard at a level of 75 ppb, based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations.
6 Parenthetical value is an approximately equivalent concentration for NO_2, O_3, and SO_2.

µg/m^3 = microgram(s) per cubic meter; mg/m^3 = milligram(s) per cubic meter; ppb = part(s) per billion; ppm = part(s) per million; USEPA = United States Environmental Protection Agency

Table C-2
General Conformity Rule *De Minimis* Emission Thresholds

Pollutant	Attainment Classification	Tons per year
Ozone (VOC and NO_x)	Serious nonattainment	50
	Severe nonattainment	25
	Extreme nonattainment	10
	Other areas outside an ozone transport region	100
Ozone (NO_x)	Marginal and moderate nonattainment inside an ozone transport region	100
	Maintenance	100
Ozone (VOC)	Marginal and moderate nonattainment inside an ozone transport region	50
	Maintenance within an ozone transport region	50
	Maintenance outside an ozone transport region	100
Carbon Monoxide, SO_2 and NO_2	All nonattainment and maintenance	100
PM_{10}	Serious nonattainment	70
	Moderate nonattainment and maintenance	100
$PM_{2.5}$ Direct emissions, SO_2, NO_x (unless determined not to be a significant precursor), VOC and ammonia (if determined to be significant precursors)	All nonattainment and maintenance	100
Lead	All nonattainment and maintenance	25

Source: USEPA, 2017

NO_2 = nitrogen dioxide; NO_x = nitrogen oxide; $PM_{2.5}$ = particulate matter with a diameter of less than 2.5 micrometers; PM_{10} = particulate matter with a diameter of less than 10 micrometers; SO_2 = sulfur dioxide; USEPA = United States Environmental Protection Agency; VOC = volatile organic compound

Direct emissions are those that occur as a direct result of the action. For example, emissions from new equipment that are a permanent component of the completed action (e.g., boilers, heaters, generators, paint booths) are considered direct emissions. Indirect emissions are those that occur at a later time or at a distance from the proposed action. For example, increased vehicular/commuter traffic because of the action is considered an indirect emission. Construction emissions must also be considered. For example, the emissions from vehicles and equipment used to clear and grade building sites, build new buildings, and construct new roads must be evaluated. These types of emissions are considered direct.

Each state is required to develop a SIP that sets forth how CAA provisions will be imposed within the state. The SIP is the primary means for the implementation, maintenance, and enforcement of the measures needed to attain and maintain the NAAQS within each state and includes control measures, emissions limitations, and other provisions required to attain and maintain the ambient air quality standards. The purpose of the SIP is twofold. First, it must provide a control strategy that will result in the attainment and maintenance of the NAAQS. Second, it must demonstrate that progress is being made in attaining the standards in each nonattainment area.

In attainment areas, major new or modified stationary sources of air emissions on and in the area are subject to Prevention of Significant Deterioration (PSD) review to ensure that these sources are constructed without causing significant adverse deterioration of the clean air in the area. A major new source is defined

as one that has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specific major source thresholds; that is, 100 or 250 tons/year based on the source's industrial category. These thresholds are applicable to stationary sources. A major modification is a physical change or change in the method of operation at an existing major source that causes a significant "net emissions increase" at that source of any regulated pollutant. **Table C-3** provides a tabular listing of the PSD significant emissions rate thresholds for selected criteria pollutants (USEPA, 1990). Air quality modeling analysis for a PSD proposed facility is required to demonstrate that its emissions of specific pollutants will not cause or significantly contribute to a violation of any ambient air quality standard.

Table C-3
Criteria Pollutant Significant Emissions Rate Increases Under Prevention of Significant Deterioration Regulations

Pollutant	Significant Emission Rate (ton/year)
PM_{10}	15
$PM_{2.5}$	10
TSP	25
SO_2	40
NO_x	40
Ozone (VOCs)	40
CO	100

Source: Title 40 Code of Federal Regulations Part 52 Subpart A, §52.21

Notes:
CO = carbon monoxide; NO_x = nitrogen oxide; $PM_{2.5}$ = particulate matter with a diameter of less than 2.5 micrometers; PM_{10} = particulate matter with a diameter of less than 10 micrometers; SO_2 = sulfur dioxide; TSP = total suspended particulate; VOC = volatile organic compound

The goals of the PSD program are to (1) ensure economic growth while preserving existing air quality; (2) protect public health and welfare from adverse effects that might occur even at pollutant levels better than the NAAQS; and (3) preserve, protect, and enhance the air quality in areas of special natural recreational, scenic, or historic value, such as national parks and wilderness areas. Sources subject to PSD review are required by the CAA to obtain a permit before commencing construction. The permit process requires an extensive review of all other major sources within a 50-mile radius and all Class I areas within a 62-mile radius of the facility. Emissions from any new or modified source must be controlled using Best Available Control Technology. The air quality, in combination with other PSD sources in the area, must not exceed the maximum allowable incremental increase identified in **Table C-4**. National parks and wilderness areas are designated as Class I areas, where any appreciable deterioration in air quality is considered significant. Class II areas are those where moderate, well-controlled industrial growth could be permitted. Class III areas allow for greater industrial development. There are no Class I areas near the Kingsley Field Air National Guard Base (ANGB).

The Air Quality Monitoring Program monitors ambient air throughout the state. The purpose is to monitor, assess, and provide information on statewide ambient air quality conditions and trends as specified by the state and federal CAA. The Air Quality Monitoring Program works in conjunction with local air pollution agencies and some industries, measuring air quality throughout the states.

The air quality monitoring network is used to identify areas where the ambient air quality standards are being violated and plans are needed to reduce pollutant concentration levels to be in attainment with the standards. Also included are areas where the ambient standards are being met, but plans are necessary to ensure maintenance of acceptable levels of air quality in the face of anticipated population or industrial growth.

Table C-4
Federal Allowable Pollutant Concentration Increases Under Prevention of Significant Deterioration Regulations

Pollutant	Averaging Time	Maximum Allowable Concentration (µg/m^3)		
		Class I	Class II	Class III
$PM_{2.5}$	Annual	1	4	8
	24-hour	2	9	18
PM_{10}	Annual	4	17	34
	24-hour	8	30	60
SO_2	Annual	2	20	40
	24-hour	5	91	182
	3-hour	25	512	700
NO_2	Annual	2.5	25	50

Source: Title 40 Code of Federal Regulations Part 52 Subpart A, §52.21

Notes:
µg/m^3 = microgram(s) per cubic meter; NO_2 = nitrogen dioxide; $PM_{2.5}$ = particulate matter with a diameter of less than 2.5 micrometers; PM_{10} = particulate matter with a diameter of less than 10 micrometers; SO_2 = sulfur dioxide

The result of this attainment/maintenance analysis is the development of local and statewide strategies for controlling emissions of criteria air pollutants from stationary and mobile sources. The first step in this process is the annual compilation of the ambient air monitoring results, and the second step is the analysis of the monitoring data for general air quality, exceedances of air quality standards, and pollutant trends.

C.1.2 Assumptions

The following are assumptions were used in the air quality analysis for the proposed and alternative actions:

1. No construction activities would be associated with Alternatives 1, 2, or 3 at Kingsley Field. This includes no demolition, earth moving, hauling, or paving. Some minor interior building fabrication possible but affected square footage is too small to result in outdoor air quality impacts.
2. No installation of new boilers or generators.
3. No new storage tanks would be installed - additional Jet A fuel needed by contract aircraft will be calculated based on engine type, number of sorties, and engine fuel consumption rate.
4. Air Force personnel would deliver fuel to the contractor at the airfield using tank trucks. Gas and diesel/Jet A fuel for the contractor's aerospace ground equipment (AGE) and flight line special purpose vehicles would be obtained by contract adversary air (ADAIR) personnel from the base Defense Logistics Agencies fuel station through an account established with 173d Logistics Readiness Squadron.
5. Chaff and flares to be used by contractor would be stored using current facilities (additional/new ammunition storage facilities not needed).
6. No new Hush House/Engine Test Cell facilities would be installed and existing Hush House/Engine Test Cell facilities would not be used for ADAIR contractor aircraft.
7. No new paint booth facilities would be installed, and existing paint booths would not be used for ADAIR contract aircraft.
8. Contractor may bring their own parts cleaner (or share already installed unit unknown at this time) - for either case it is assumed contractor use would be minimal - (no more than 0.5 gallon/month solvent used/lost).
9. Maintenance for contractor aircraft would be limited to minor repairs and minor routine maintenance/inspections (significant repairs, schedule/phased maintenance and inspections to be conducted off-site).

10. While ADAIR targeted performance is estimated to start in February 2020 with a 10-year contract, the emissions were estimated for each year of the Proposed Action beginning in July 2019 and ending in June 2029. For air quality modeling purposes, these are representative years; the modeling generates air emissions estimates for the life of a representative 10-year contract. A full year is a reference year and partial years (start and end year) may be determined by dividing by the number of months estimated for that year.
11. Contractor aircraft take-off and landing cycles - use/assume Air Conformity Applicability Model (ACAM) default "times in mode" to be conservative.
12. Assume once an aircraft is out of the landing and take-off (LTO) cycle the time (5 to 10 minutes) spent traveling to/from the warning areas is at an altitude above 3,000 feet (ft).
13. Assume mixing height is 3,000 ft (this matches USEPA and Air Force Guidance).
14. Air Force training sorties would not increase or decrease as result of this action. Roles may change (i.e., the Air Force no longer need to play the adversary, but this will not change in any substantial way the number of Air Force sorties flown); thus, the change (increase) in emissions for air operations would be strictly due to the addition of the contract ADAIR aircraft and associated ground and maintenance activities.
15. Air Force use of engine test cells/hush house would not change as a result of the Proposed Action. No changes to Air Force trim tests also assumed.
16. For the High air emission scenario, the surrogate for the MIG-21 is the F16 C/D with engine model F110-GE-100.
17. For the Medium air emission scenario, the surrogate for the Mirage is the F-16 with engine model F110-GE-100. The use of the F-16C with engine model F100-PW-220 is the surrogate for Medium Noise scenario only.
18. For the Low emission scenario, represented by the F-5 aircraft, there are two potential engine types. We have assumed J85-GE-13 for the engine model.
19. For contactor AGE and auxiliary power units (APUs) - until the contractor is selected, what they would bring/use in terms of AGE and APUs is unknown, thus ACAM defaults will be used based on the surrogate aircraft and engine type.
20. Assume contract aircraft would engage in LTO cycles, and touch and go (TGO) or low approach activities only in the vicinity of the airfield.
21. Assume 5 percent of on-airfield daytime sorties (2,000) would include multiple patterns for contractor proficiency.
22. It is unknown what contractor requirements would be for trim tests; thus, ACAM defaults will be assumed based on surrogate aircraft and engine type.
23. Assume all new ADAIR contractor personnel (pilots and maintenance staff) would live off-base and commute to the base 5 days per week. Will use ACAM defaults for commute distances.
24. All contract ADAIR training sorties would utilize chaff and flares. Only RR-188 chaff and M206 flares would be utilized (no other materials will be considered in the analysis).
25. Assume air quality impacts from chaff releases under actual flight conditions would be low and will have negligible impact on the particulate matter with a diameter of less than 10 and 2.5 micrometers NAAQS (Air Force, 1997); thus, only the use of flares and impulse cartridges (if applicable) used at or below 3,000 ft will be considered in the air quality analysis. It is assumed flares used above 3,000 ft will disperse and not affect air quality in the lowest 3,000 ft above ground level (AGL). Kingsley Field ANGB does not release flares below 5,000 ft AGL thus flare emissions have not been included in the air quality analysis.
26. All ADAIR related training at Kingsley Field ANGB would occur in the special use airspace as described in the **Chapter 1**. Potential air quality impacts would occur in portions of three states (Oregon, California, Nevada) covered by three separate AQCRs. For consideration of potential air quality impacts, it is the volume of air extending up to the mixing height (3,000 ft AGL/ASL) and coinciding with the spatial distribution of the region of influence that is considered. Pollutants that are released above the mixing height typically would not disperse downward and thus would have little or no effect on ground level concentrations of pollutants. The mixing height is the altitude at which the lower atmosphere undergoes mechanical or turbulent mixing, producing a nearly uniform air mass. The height of the mixing level determines the volume of air within which pollutants can disperse. Mixing heights at any one location or region can vary by the season and time of day, but for air quality applications an average mixing height of 3,000 ft AGL is an

acceptable default value (40 CFR § 93.153[c][2]). Although the proposed ADAIR training is projected to occur within four training areas (three MOAs and Warning Area W-93) only the Juniper/Hart MOA Complex and W-93 have airspace where ADAIR sortie altitudes are proposed to extend below 3,000 ft AGL.

27. Contractor training/mission time in airspace would be approximately 40 minutes (time spent at or below 3,000 ft is estimated to be approximately 11.4 minutes)
28. ACAM does not have separate inputs for time spent within a MOA or Warning Area. To represent the time spent at or below 3,000 ft, 11.4 minutes was assigned to Climb out/Intermediate power mode within the ACAM LTO input fields. No time was assigned to any other power modes, but default ACAM output also lists trim tests and TGOs; however, all inputs for these fields were set to zero for time spent within the MOAs/Warning Area (**Table C-6**).
29. Assume the time spent below 3,000 ft AGL would be the same for all sorties.
30. Goose and Dolphin MOAs have floors that are greater than 3,000 ft AGL.
31. Assume no changes in the number of transient aircraft LTO cycles due to the addition of contractor ADAIR.
32. **Tables C-5** and **C-6** below show the data and assumptions used as input to ACAM for flight operations.

Table C-5
Airspace Assumptions and Air Conformity Applicability Model Data Inputs

Special Use Airspace	Percent of Total Sorties	No. of Sorties in Airspace[1]	Minimum Mission Altitude	Total Mission Time (minutes) ≤3,000 ft AGL	Power Mode[5]
Juniper/Hart MOA (Low and High)[2]	70	1,400	500 ft AGL[3]	11.4[4]	Intermediate/ Climb Out
Dolphin MOA	9.5	190	11,000 ft AGL	0	N/A
Goose MOA	20	400	10,000 AGL	0	N/A
W-93	0.5	10	Surface Level	11.4[4]	Intermediate/ Climb Out

Notes:
[1] Based on 2,000 total sorties in special use airspace (Source: CAF ADAIR Calculator - NEPA 6)
[2] Assume a portion of all sorties to occur in Juniper/Hart MOA would occur at or below 3,000 ft
[3] Estimated 50 percent of time spent between 500 to 6,000 ft AGL
[4] Based on 40 minutes per sortie and proportioned based on percent of time spent between 500 to 4,000 ft
Minutes @ 500 to 4,000 ft = 40 minutes * 40 percent (percent time in altitude range) = 16 minutes
Minutes @ 500 to 3,000 ft = 16 minutes - (16 minutes * 1,000 ft/3,500 ft) = 11.4 minutes
[5] ACAM does not have separate inputs for time spent within a MOA. To represent the time spent within a MOA, the expected flight time at or below 3,000 ft (11.9 minutes) was assigned to Climb out/Intermediate power mode within the ACAM LTO input fields. No time was assigned to any other power modes.

ACAM = Air Conformity Applicability Model; ADAIR = adversary air; AGL = above ground level; CAF = Combat Air Forces; DOPAA = Description of Proposed Action and Alternatives; EIS = Environmental Impact Statement, ft = feet; LTO = landing and take-off; N/A = not applicable; MOA = Military Operations Area; NEPA = National Environmental Policy Act

Table C-6
Times in Mode[1] (minutes) for Aircraft Operations

Type of Operation	Number of Sorties	Taxi/Idle (out)	Take-off (Military and/or Afterburn	Climb Out	Approach	Taxi/Idle(in)
LTO	2,000	18.5	0.4	0.8	3.5	11.3
TGO[2]	270	-	-	0.8	3.5	-

Notes:
[1] Given time in mode applicable to all emission scenarios (high, medium, and low)
[2] 5 percent of on-airfield daytime sorties (1,800) are expected to include multiple patterns for contractor proficiency. Each of those 5 percent sorties is assumed to include three TGO/low approaches.

LTO = landing and take-off; TGO = touch and go

C.1.3 Regulatory Comparisons

The CAA Section 176(c), General Conformity, requires federal agencies to demonstrate that their proposed activities would conform to the applicable SIP for attainment of the NAAQS. General conformity applies only to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area exceed annual *de minimis* thresholds identified in the rule, a formal conformity determination is required of that action. The thresholds are more restrictive as the severity of the nonattainment status of the region increases. The Council on Environmental Quality (CEQ) defines significance in terms of context and intensity in 40 CFR § 1508.27. This requires that the significance of the action be analyzed with respect to the setting of the proposed action and based relative to the severity of the impact. The CEQ NEPA regulations (40 CFR § 1508.27[b]) provide 10 key factors to consider in determining an impact's intensity.

Estimates of emissions are summarized in **Chapter 4** of the Environmental Assessment. ACAM summary reports for each emission scenario for the Kingsley Field ANGB are provided as **Appendix C-2.**

C.2 REFERENCES

USEPA. 1990. Office of Air Quality Planning and Standards. *Draft New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Permitting.* October.

USEPA. 2010. *40 CFR Parts 51 and 93, Revisions to the General Conformity Regulations*. 75 Federal Register 14283, EPA-HQ-OAR-2006-0669; FRL-9131-7. 24 March.

USEPA. 2016. *NAAQS Table*. <https://www.epa.gov/criteria-air-pollutants/naaqs-table>. 20 December.

USEPA. 2017. *General Conformity: De Minimis* Tables. <https://www.epa.gov/general-conformity/de-minimis-tables>. 04 August.

Appendix C-2

Detailed Air Conformity Applicability Model Sample Report
(Airfield – High Emission Scenario)

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1. General Information

- Action Location
Base: KINGSLEY FIELD
County(s): Klamath
Regulatory Area(s): Klamath Falls, OR

- Action Title: Contractor ADAIR Emissions-Airfield Operations

- Project Number/s (if applicable):

- Projected Action Start Date: 7 / 2019

- Action Purpose and Need:

- Action Description:
Kingsley Airfield Operations and emissions.

- Point of Contact
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 830-776-2315

- Activity List:

Activity Type		Activity Title
2.	Aircraft	Contractor ADAIR Emissions-Airfield Operations
3.	Personnel	Personnel Amount for ADAIR
4.	Tanks	Tank emissions for AOPS High
5.	Tanks	Tank 2 emissions

2. Aircraft

2.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Klamath
Regulatory Area(s): Klamath Falls, OR; Klamath Falls, OR

- Activity Title: Contractor ADAIR Emissions-Airfield Operations

- Activity Description:
Airfield Emission-Test
High Scenario

- Activity Start Date
Start Month: 7
Start Year: 2019

- Activity End Date
Indefinite: No

End Month: 6
End Year: 2029

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	90.972493
SO_x	37.134750
NO_x	473.091611
CO	943.618979
PM10	67.471205

Pollutant	Total Emissions (TONs)
PM2.5	61.480171
Pb	0.000000
NH_3	0.000000
CO_2e	86821.3

- Activity Emissions [Flight Operations (includes Trim Test & APU) part]:

Pollutant	Total Emissions (TONs)
VOC	50.908753
SO_x	29.947261
NO_x	369.037492
CO	637.114592
PM10	55.019184

Pollutant	Total Emissions (TONs)
PM2.5	49.517265
Pb	0.000000
NH_3	0.000000
CO_2e	80842.3

- Activity Emissions [Aerospace Ground Equipment (AGE) part]:

Pollutant	Total Emissions (TONs)
VOC	40.063740
SO_x	7.187488
NO_x	104.054118
CO	306.504386
PM10	12.452022

Pollutant	Total Emissions (TONs)
PM2.5	11.962906
Pb	0.000000
NH_3	0.000000
CO_2e	5978.9

2.2 Aircraft & Engines

2.2.1 Aircraft & Engines Assumptions

- Aircraft & Engine
Aircraft Designation: F-15A
Engine Model: F100-PW-100
Primary Function: Combat
Number of Engines: 2

- Aircraft & Engine Surrogate
Is Aircraft & Engine a Surrogate? Yes
Original Aircraft Name: MiG-29
Original Engine Name: Klimov RD-33

2.2.2 Aircraft & Engines Emission Factor(s)

- Aircraft & Engine Emissions Factors (lb/1000lb fuel)

	Fuel Flow	VOC	SO_x	NO_x	CO	PM10	PM2.5	CO_2e
Idle	1127.00	3.79	1.06	4.64	49.58	3.13	2.82	3234
Approach	2765.00	1.06	1.06	12.52	3.99	1.57	1.41	3234
Intermediate	7685.00	0.14	1.06	27.09	0.72	0.72	0.65	3234
Military	10996.00	0.12	1.06	35.01	0.70	1.24	1.12	3234
After Burn	54007.00	0.13	1.06	6.62	9.57	0.87	0.78	3234

2.3 Flight Operations

2.3.1 Flight Operations Assumptions

- Flight Operations

Number of Aircraft:	6
Number of Annual LTOs (Landing and Take-off) cycles for all Aircraft:	2000
Number of Annual TGOs (Touch-and-Go) cycles for all Aircraft:	270
Number of Annual Trim Test(s) per Aircraft:	24

- Default Settings Used: No

- Flight Operations TIMs (Time In Mode)

Taxi/Idle Out (mins):	18.5
Takeoff (mins):	0.4
Climb Out (mins):	0.8
Approach (mins):	3.5
Taxi/Idle In (mins):	11.3

- Trim Test

Idle (mins):	12
Approach (mins):	27
Intermediate (mins):	9
Military (mins):	9
AfterBurn (mins):	0

2.3.2 Flight Operations Formula(s)

- Aircraft Emissions per Mode for LTOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * LTO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
LTO: Number of Landing and Take-off Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for LTOs per Year

$AE_{LTO} = AEM_{IDLE\_IN} + AEM_{IDLE\_OUT} + AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{LTO}: Aircraft Emissions (TONs)
AEM_{IDLE_IN}: Aircraft Emissions for Idle-In Mode (TONs)
AEM_{IDLE_OUT}: Aircraft Emissions for Idle-Out Mode (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for TGOs per Year

$AEM_{POL} = (TIM / 60) * (FC / 1000) * EF * NE * TGO / 2000$

AEM_{POL}: Aircraft Emissions per Pollutant & Mode (TONs)
TIM: Time in Mode (min)

60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
TGO: Number of Touch-and-Go Cycles (for all aircraft)
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for TGOs per Year

$AE_{TGO} = AEM_{APPROACH} + AEM_{CLIMBOUT} + AEM_{TAKEOFF}$

AE_{TGO}: Aircraft Emissions (TONs)
$AEM_{APPROACH}$: Aircraft Emissions for Approach Mode (TONs)
$AEM_{CLIMBOUT}$: Aircraft Emissions for Climb-Out Mode (TONs)
$AEM_{TAKEOFF}$: Aircraft Emissions for Take-Off Mode (TONs)

- Aircraft Emissions per Mode for Trim per Year

$AEPS_{POL} = (TD / 60) * (FC / 1000) * EF * NE * NA * NTT / 2000$

$AEPS_{POL}$: Aircraft Emissions per Pollutant & Power Setting (TONs)
TD: Test Duration (min)
60: Conversion Factor minutes to hours
FC: Fuel Flow Rate (lb/hr)
1000: Conversion Factor pounds to 1000pounds
EF: Emission Factor (lb/1000lb fuel)
NE: Number of Engines
NA: Number of Aircraft
NTT: Number of Trim Test
2000: Conversion Factor pounds to TONs

- Aircraft Emissions for Trim per Year

$AE_{TRIM} = AEPS_{IDLE} + AEPS_{APPROACH} + AEPS_{INTERMEDIATE} + AEPS_{MILITARY} + AEPS_{AFTERBURN}$

AE_{TRIM}: Aircraft Emissions (TONs)
$AEPS_{IDLE}$: Aircraft Emissions for Idle Power Setting (TONs)
$AEPS_{APPROACH}$: Aircraft Emissions for Approach Power Setting (TONs)
$AEPS_{INTERMEDIATE}$: Aircraft Emissions for Intermediate Power Setting (TONs)
$AEPS_{MILITARY}$: Aircraft Emissions for Military Power Setting (TONs)
$AEPS_{AFTERBURN}$: Aircraft Emissions for After Burner Power Setting (TONs)

2.4 Auxiliary Power Unit (APU)

2.4.1 Auxiliary Power Unit (APU) Assumptions

- Default Settings Used: Yes

- Auxiliary Power Unit (APU) (default)

Number of APU per Aircraft	Operation Hours for Each LTO	Exempt Source?	Designation	Manufacturer

2.4.2 Auxiliary Power Unit (APU) Emission Factor(s)

- Auxiliary Power Unit (APU) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM10	PM2.5	CO_2e

2.4.3 Auxiliary Power Unit (APU) Formula(s)

- Auxiliary Power Unit (APU) Emissions per Year
$APU_{POL} = APU * OH * LTO * EF_{POL} / 2000$

APU_{POL}: Auxiliary Power Unit (APU) Emissions per Pollutant (TONs)
APU: Number of Auxiliary Power Units
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

2.5 Aerospace Ground Equipment (AGE)

2.5.1 Aerospace Ground Equipment (AGE) Assumptions

- Default Settings Used: Yes

- AGE Usage
Number of Annual LTO (Landing and Take-off) cycles for AGE: 2000

- Aerospace Ground Equipment (AGE) (default)

Total Number of AGE	Operation Hours for Each LTO	Exempt Source?	AGE Type	Designation
1	2	No	Air Compressor	MC-11
1	1	No	Bomb Lift	MJ-1B
1	0.33	No	Generator Set	A/M32A-86D
1	0.5	No	Heater	H1
1	0.5	No	Hydraulic Test Stand	MJ-2/TTU-228 - 130hp
1	8	No	Light Cart	NF-2
1	0.33	No	Start Cart	A/M32A-60A

2.5.2 Aerospace Ground Equipment (AGE) Emission Factor(s)

- Aerospace Ground Equipment (AGE) Emission Factor (lb/hr)

Designation	Fuel Flow	VOC	SO_x	NO_x	CO	PM10	PM2.5	CO_2e
MC-11	1.8	0.276	0.004	0.177	12.262	0.109	0.100	34.8
MJ-1B	0.0	3.040	0.219	4.780	3.040	0.800	0.776	141.2
A/M32A-86D	6.5	0.294	0.046	6.102	0.457	0.091	0.089	147.0
H1	0.4	0.100	0.011	0.160	0.180	0.006	0.006	8.9
MJ-2/TTU-228 - 130hp	7.4	0.195	0.053	3.396	0.794	0.089	0.086	168.8
NF-2	0.0	0.010	0.043	0.110	0.080	0.010	0.010	22.1
A/M32A-60A	0.0	0.270	0.306	1.820	5.480	0.211	0.205	221.1

2.5.3 Aerospace Ground Equipment (AGE) Formula(s)

- Aerospace Ground Equipment (AGE) Emissions per Year
AGE_{POL} = AGE * OH * LTO * EF_{POL} / 2000

AGE_{POL}: Aerospace Ground Equipment (AGE) Emissions per Pollutant (TONs)
AGE: Total Number of Aerospace Ground Equipment
OH: Operation Hours for Each LTO (hour)
LTO: Number of LTOs
EF_{POL}: Emission Factor for Pollutant (lb/hr)
2000: Conversion Factor pounds to tons

3. Personnel

3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Klamath
Regulatory Area(s): Klamath Falls, OR; Klamath Falls, OR

- Activity Title: Personnel Amount for ADAIR

- Activity Description:
ADAIR personnel that will be on base for all alternatives.

- Activity Start Date
Start Month: 7
Start Year: 2019

- Activity End Date
Indefinite: No
End Month: 6
End Year: 2029

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	1.060026
SO_x	0.007077
NO_x	1.035216
CO	11.795774
PM10	0.025771

Pollutant	Total Emissions (TONs)
PM2.5	0.022975
Pb	0.000000
NH_3	0.067730
CO_2e	1035.1

3.2 Personnel Assumptions

- Number of Personnel
Active Duty Personnel: 0
Civilian Personnel: 47
Support Contractor Personnel: 0
Air National Guard (ANG) Personnel: 0
Reserve Personnel: 0

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

- Personnel Work Schedule

Active Duty Personnel:	5 Days Per Week (default)
Civilian Personnel:	5 Days Per Week (default)
Support Contractor Personnel:	5 Days Per Week (default)
Air National Guard (ANG) Personnel:	4 Days Per Week (default)
Reserve Personnel:	4 Days Per Month (default)

3.3 Personnel On Road Vehicle Mixture

- On Road Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

3.4 Personnel Emission Factor(s)

- On Road Vehicle Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM10	PM2.5	Pb	NH_3	CO_2e
LDGV	000.311	000.002	000.262	003.376	000.008	000.007		000.024	00325.765
LDGT	000.385	000.003	000.446	004.711	000.010	000.009		000.025	00419.873
HDGV	000.750	000.005	001.196	016.368	000.023	000.020		000.045	00749.868
LDDV	000.126	000.003	000.141	002.334	000.004	000.004		000.008	00315.847
LDDT	000.288	000.004	000.430	004.270	000.007	000.006		000.008	00453.808
HDDV	000.528	000.013	005.536	001.839	000.190	000.175		000.028	01473.856
MC	002.304	000.003	000.836	013.637	000.027	000.024		000.054	00397.097

3.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year

$VMT_P = NP * WD * AC$

VMT_P: Personnel Vehicle Miles Travel (miles/year)
NP: Number of Personnel
WD: Work Days per Year
AC: Average Commute (miles)

- Total Vehicle Miles Travel per Year

$VMT_{Total} = VMT_{AD} + VMT_C + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$

VMT_{Total}: Total Vehicle Miles Travel (miles)
VMT_{AD}: Active Duty Personnel Vehicle Miles Travel (miles)
VMT_C: Civilian Personnel Vehicle Miles Travel (miles)
VMT_{SC}: Support Contractor Personnel Vehicle Miles Travel (miles)
VMT_{ANG}: Air National Guard Personnel Vehicle Miles Travel (miles)
VMT_{AFRC}: Reserve Personnel Vehicle Miles Travel (miles)

- Vehicle Emissions per Year

$V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{Total}: Total Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Personnel On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

4. Tanks

4.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Klamath
Regulatory Area(s): Klamath Falls, OR; Klamath Falls, OR

- Activity Title: Tank emissions for AOPS High

- Activity Description:
AOPS HIgh tank emissions

- Activity Start Date
Start Month: 7
Start Year: 2019

- Activity End Date
Indefinite: No
End Month: 6
End Year: 2029

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.144609
SO_x	0.000000
NO_x	0.000000
CO	0.000000
PM10	0.000000

Pollutant	Total Emissions (TONs)
PM2.5	0.000000
Pb	0.000000
NH_3	0.000000
CO_2e	0.0

4.2 Tanks Assumptions

- Chemical
Chemical Name: Jet kerosene (JP-5, JP-8 or Jet-A)
Chemical Category: Petroleum Distillates
Chemical Density: 7
Vapor Molecular Weight (lb/lb-mole): 130
Stock Vapor Density (lb/ft^3): 0.000170775135930213
Vapor Pressure: 0.00725
Vapor Space Expansion Factor (dimensionless): 0.068

- Tank
Type of Tank: Vertical Tank
Tank Height (ft): 8
Tank Diameter (ft): 16
Annual Net Throughput (gallon/year): 133652.51

4.3 Tank Formula(s)

- Vapor Space Volume

VSV = (PI / 4) * D^2 * H / 2

VSV: Vapor Space Volume (ft^3)
PI: PI Math Constant
D^2: Tank Diameter (ft)
H: Tank Height (ft)
2: Convertion Factor (Vapor Space Volume is assumed to be one-half of the tank volume)

- Vented Vapor Saturation Factor

VVSF = 1 / (1 + (0.053 * VP * H / 2))

VVSF: Vented Vapor Saturation Factor (dimensionless)
0.053: Constant
VP: Vapor Pressure (psia)
H: Tank Height (ft)

- Standing Storage Loss per Year

SSL_{VOC} = 365 * VSV * SVD * VSEF * VVSF / 2000

SSL_{VOC}: Standing Storage Loss Emissions (TONs)
365: Number of Daily Events in a Year (Constant)
VSV: Vapor Space Volume (ft^3)
SVD: Stock Vapor Density (lb/ft^3)
VSEF: Vapor Space Expansion Factor (dimensionless)
VVSF: Vented Vapor Saturation Factor (dimensionless)
2000: Conversion Factor pounds to tons

- Number of Turnovers per Year

NT = (7.48 * ANT) / ((PI / 4.0) * D * H)

NT: Number of Turnovers per Year
7.48: Constant
ANT: Annual Net Throughput
PI: PI Math Constant
D^2: Tank Diameter (ft)
H: Tank Height (ft)

- Working Loss Turnover (Saturation) Factor per Year

WLSF = (18 + NT) / (6 * NT)

WLSF: Working Loss Turnover (Saturation) Factor per Year
18: Constant
NT: Number of Turnovers per Year
6: Constant

- Working Loss per Year

WL_{VOC} = 0.0010 * VMW * VP * ANT * WLSF / 2000

0.0010: Constant
VMW: Vapor Molecular Weight (lb/lb-mole)
VP: Vapor Pressure (psia)
ANT: Annual Net Throughput

WLSF: Working Loss Turnover (Saturation) Factor
2000: Conversion Factor pounds to tons

5. Tanks

5.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Klamath
Regulatory Area(s): Klamath Falls, OR; Klamath Falls, OR

- Activity Title: Tank 2 emissions

- Activity Description:
Tank 2 emission for high

- Activity Start Date
Start Month: 7
Start Year: 2019

- Activity End Date
Indefinite: No
End Month: 6
End Year: 2029

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.144609
SO_x	0.000000
NO_x	0.000000
CO	0.000000
PM10	0.000000

Pollutant	Total Emissions (TONs)
PM2.5	0.000000
Pb	0.000000
NH_3	0.000000
CO_2e	0.0

5.2 Tanks Assumptions

- Chemical
Chemical Name: Jet kerosene (JP-5, JP-8 or Jet-A)
Chemical Category: Petroleum Distillates
Chemical Density: 7
Vapor Molecular Weight (lb/lb-mole): 130
Stock Vapor Density (lb/ft^3): 0.000170775135930213
Vapor Pressure: 0.00725
Vapor Space Expansion Factor (dimensionless): 0.068

- Tank
Type of Tank: Vertical Tank
Tank Height (ft): 8
Tank Diameter (ft): 16
Annual Net Throughput (gallon/year): 133652.51

5.3 Tank Formula(s)

- Vapor Space Volume

$VSV = (PI / 4) * D^2 * H / 2$

VSV: Vapor Space Volume (ft^3)
PI: PI Math Constant
D^2: Tank Diameter (ft)
H: Tank Height (ft)
2: Convertion Factor (Vapor Space Volume is assumed to be one-half of the tank volume)

- Vented Vapor Saturation Factor

$VVSF = 1 / (1 + (0.053 * VP * H / 2))$

VVSF: Vented Vapor Saturation Factor (dimensionless)
0.053: Constant
VP: Vapor Pressure (psia)
H: Tank Height (ft)

- Standing Storage Loss per Year

$SSL_{VOC} = 365 * VSV * SVD * VSEF * VVSF / 2000$

SSL_{VOC}: Standing Storage Loss Emissions (TONs)
365: Number of Daily Events in a Year (Constant)
VSV: Vapor Space Volume (ft^3)
SVD: Stock Vapor Density (lb/ft^3)
VSEF: Vapor Space Expansion Factor (dimensionless)
VVSF: Vented Vapor Saturation Factor (dimensionless)
2000: Conversion Factor pounds to tons

- Number of Turnovers per Year

$NT = (7.48 * ANT) / ((PI / 4.0) * D * H)$

NT: Number of Turnovers per Year
7.48: Constant
ANT: Annual Net Throughput
PI: PI Math Constant
D^2: Tank Diameter (ft)
H: Tank Height (ft)

- Working Loss Turnover (Saturation) Factor per Year

$WLSF = (18 + NT) / (6 * NT)$

WLSF: Working Loss Turnover (Saturation) Factor per Year
18: Constant
NT: Number of Turnovers per Year
6: Constant

- Working Loss per Year

$WL_{VOC} = 0.0010 * VMW * VP * ANT * WLSF / 2000$

0.0010: Constant
VMW: Vapor Molecular Weight (lb/lb-mole)
VP: Vapor Pressure (psia)
ANT: Annual Net Throughput

WLSF: Working Loss Turnover (Saturation) Factor
2000: Conversion Factor pounds to tons

Appendix C-3

Summary Air Conformity Applicability Model Reports
Record of Air Analysis (ROAA)

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KINGSLEY FIELD HIGH SCENARIO SUMMARY

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, *Air Quality Compliance And Resource Management*; the Environmental Impact Analysis Process (EIAP, 32 CFR Part 989); and the General Conformity Rule (GCR, 40 CFR Part 93, Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: KINGSLEY FIELD
County(s): Klamath
Regulatory Area(s): Klamath Falls, OR

b. Action Title: Contractor ADAIR Emissions-Airfield Operations

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2019

e. Action Description:

Kingsley airfield operations and emissions.

f. Point of Contact:
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 830-776-2315

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR Part 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.616	100	No
NOx	23.706	100	No
CO	47.771		
SOx	1.857	100	No
PM10	3.375		
PM2.5	3.075	100	No
Pb	0.000		
NH3	0.003	100	No
CO2e	4392.8		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.616		
NOx	23.706		
CO	47.771	100	No
SOx	1.857		
PM10	3.375	100	No
PM2.5	3.075		
Pb	0.000		
NH3	0.003		
CO2e	4392.8		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	9.232	100	No
NOx	47.413	100	No
CO	95.541		
SOx	3.714	100	No
PM10	6.750		
PM2.5	6.150	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	8785.6		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	9.232		
NOx	47.413		
CO	95.541	100	No
SOx	3.714		
PM10	6.750	100	No
PM2.5	6.150		
Pb	0.000		
NH3	0.007		
CO2e	8785.6		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	9.232	100	No
NOx	47.413	100	No
CO	95.541		
SOx	3.714	100	No
PM10	6.750		
PM2.5	6.150	100	No
Pb	0.000		
NH3	0.007	100	No

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
CO2e	8785.6		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	9.232		
NOx	47.413		
CO	95.541	100	No
SOx	3.714		
PM10	6.750	100	No
PM2.5	6.150		
Pb	0.000		
NH3	0.007		
CO2e	8785.6		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	9.232	100	No
NOx	47.413	100	No
CO	95.541		
SOx	3.714	100	No
PM10	6.750		
PM2.5	6.150	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	8785.6		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	9.232		
NOx	47.413		
CO	95.541	100	No
SOx	3.714		
PM10	6.750	100	No
PM2.5	6.150		
Pb	0.000		
NH3	0.007		
CO2e	8785.6		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	9.232	100	No
NOx	47.413	100	No
CO	95.541		
SOx	3.714	100	No
PM10	6.750		
PM2.5	6.150	100	No
Pb	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NH3	0.007	100	No
CO2e	8785.6		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	9.232		
NOx	47.413		
CO	95.541	100	No
SOx	3.714		
PM10	6.750	100	No
PM2.5	6.150		
Pb	0.000		
NH3	0.007		
CO2e	8785.6		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	9.232	100	No
NOx	47.413	100	No
CO	95.541		
SOx	3.714	100	No
PM10	6.750		
PM2.5	6.150	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	8785.6		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	9.232		
NOx	47.413		
CO	95.541	100	No
SOx	3.714		
PM10	6.750	100	No
PM2.5	6.150		
Pb	0.000		
NH3	0.007		
CO2e	8785.6		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	9.232	100	No
NOx	47.413	100	No
CO	95.541		
SOx	3.714	100	No
PM10	6.750		
PM2.5	6.150	100	No

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Pb	0.000		
NH3	0.007	100	No
CO2e	8785.6		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	9.232		
NOx	47.413		
CO	95.541	100	No
SOx	3.714		
PM10	6.750	100	No
PM2.5	6.150		
Pb	0.000		
NH3	0.007		
CO2e	8785.6		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	9.232	100	No
NOx	47.413	100	No
CO	95.541		
SOx	3.714	100	No
PM10	6.750		
PM2.5	6.150	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	8785.6		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	9.232		
NOx	47.413		
CO	95.541	100	No
SOx	3.714		
PM10	6.750	100	No
PM2.5	6.150		
Pb	0.000		
NH3	0.007		
CO2e	8785.6		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	9.232	100	No
NOx	47.413	100	No
CO	95.541		
SOx	3.714	100	No
PM10	6.750		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM2.5	6.150	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	8785.6		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	9.232		
NOx	47.413		
CO	95.541	100	No
SOx	3.714		
PM10	6.750	100	No
PM2.5	6.150		
Pb	0.000		
NH3	0.007		
CO2e	8785.6		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	9.232	100	No
NOx	47.413	100	No
CO	95.541		
SOx	3.714	100	No
PM10	6.750		
PM2.5	6.150	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	8785.6		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	9.232		
NOx	47.413		
CO	95.541	100	No
SOx	3.714		
PM10	6.750	100	No
PM2.5	6.150		
Pb	0.000		
NH3	0.007		
CO2e	8785.6		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.616	100	No
NOx	23.706	100	No
CO	47.771		
SOx	1.857	100	No

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM10	3.375		
PM2.5	3.075	100	No
Pb	0.000		
NH3	0.003	100	No
CO2e	4392.8		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.616		
NOx	23.706		
CO	47.771	100	No
SOx	1.857		
PM10	3.375	100	No
PM2.5	3.075		
Pb	0.000		
NH3	0.003		
CO2e	4392.8		

2030 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000	100	No
PM10	0.000		
PM2.5	0.000	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	0.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR §93.153(b); therefore, the requirements of the General Conformity Rule are not applicable.

Isaac Jimenez, Environmental Scientist — 05/29/2019 DATE

KINGSLEY FIELD MEDIUM SCENARIO SUMMARY

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, *Air Quality Compliance And Resource Management*; the Environmental Impact Analysis Process (EIAP, 32 CFR Part 989); and the General Conformity Rule (GCR, 40 CFR Part 93, Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: KINGSLEY FIELD
County(s): Klamath
Regulatory Area(s): Klamath Falls, OR

b. Action Title: Contractor ADAIR Emissions-Airfield Operations

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2019

e. Action Description:

Kingsley airfield operations and emissions.

f. Point of Contact:
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 830-776-2315

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR Part 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	2.437	100	No
NOx	13.880	100	No
CO	29.001		
SOx	1.295	100	No
PM10	1.951		
PM2.5	1.303	100	No
Pb	0.000		
NH3	0.003	100	No
CO2e	3179.0		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory CO and PM10			
VOC	2.437		
NOx	13.880		
CO	29.001	100	No
SOx	1.295		
PM10	1.951	100	No
PM2.5	1.303		
Pb	0.000		
NH3	0.003		
CO2e	3179.0		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.874	100	No
NOx	27.761	100	No
CO	58.002		
SOx	2.591	100	No
PM10	3.902		
PM2.5	2.605	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	6358.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.874		
NOx	27.761		
CO	58.002	100	No
SOx	2.591		
PM10	3.902	100	No
PM2.5	2.605		
Pb	0.000		
NH3	0.007		
CO2e	6358.0		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.874	100	No
NOx	27.761	100	No
CO	58.002		
SOx	2.591	100	No
PM10	3.902		
PM2.5	2.605	100	No
Pb	0.000		
NH3	0.007	100	No

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
CO2e	6358.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.874		
NOx	27.761		
CO	58.002	100	No
SOx	2.591		
PM10	3.902	100	No
PM2.5	2.605		
Pb	0.000		
NH3	0.007		
CO2e	6358.0		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.874	100	No
NOx	27.761	100	No
CO	58.002		
SOx	2.591	100	No
PM10	3.902		
PM2.5	2.605	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	6358.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.874		
NOx	27.761		
CO	58.002	100	No
SOx	2.591		
PM10	3.902	100	No
PM2.5	2.605		
Pb	0.000		
NH3	0.007		
CO2e	6358.0		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.874	100	No
NOx	27.761	100	No
CO	58.002		
SOx	2.591	100	No
PM10	3.902		
PM2.5	2.605	100	No
Pb	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NH3	0.007	100	No
CO2e	6358.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.874		
NOx	27.761		
CO	58.002	100	No
SOx	2.591		
PM10	3.902	100	No
PM2.5	2.605		
Pb	0.000		
NH3	0.007		
CO2e	6358.0		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.874	100	No
NOx	27.761	100	No
CO	58.002		
SOx	2.591	100	No
PM10	3.902		
PM2.5	2.605	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	6358.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.874		
NOx	27.761		
CO	58.002	100	No
SOx	2.591		
PM10	3.902	100	No
PM2.5	2.605		
Pb	0.000		
NH3	0.007		
CO2e	6358.0		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.874	100	No
NOx	27.761	100	No
CO	58.002		
SOx	2.591	100	No
PM10	3.902		
PM2.5	2.605	100	No

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Pb	0.000		
NH3	0.007	100	No
CO2e	6358.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.874		
NOx	27.761		
CO	58.002	100	No
SOx	2.591		
PM10	3.902	100	No
PM2.5	2.605		
Pb	0.000		
NH3	0.007		
CO2e	6358.0		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.874	100	No
NOx	27.761	100	No
CO	58.002		
SOx	2.591	100	No
PM10	3.902		
PM2.5	2.605	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	6358.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.874		
NOx	27.761		
CO	58.002	100	No
SOx	2.591		
PM10	3.902	100	No
PM2.5	2.605		
Pb	0.000		
NH3	0.007		
CO2e	6358.0		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.874	100	No
NOx	27.761	100	No
CO	58.002		
SOx	2.591	100	No
PM10	3.902		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM2.5	2.605	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	6358.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.874		
NOx	27.761		
CO	58.002	100	No
SOx	2.591		
PM10	3.902	100	No
PM2.5	2.605		
Pb	0.000		
NH3	0.007		
CO2e	6358.0		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	4.874	100	No
NOx	27.761	100	No
CO	58.002		
SOx	2.591	100	No
PM10	3.902		
PM2.5	2.605	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	6358.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	4.874		
NOx	27.761		
CO	58.002	100	No
SOx	2.591		
PM10	3.902	100	No
PM2.5	2.605		
Pb	0.000		
NH3	0.007		
CO2e	6358.0		

2029

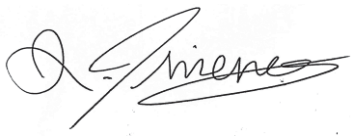
Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	2.437	100	No
NOx	13.880	100	No
CO	29.001		
SOx	1.295	100	No

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM10	1.951		
PM2.5	1.303	100	No
Pb	0.000		
NH3	0.003	100	No
CO2e	3179.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	2.437		
NOx	13.880		
CO	29.001	100	No
SOx	1.295		
PM10	1.951	100	No
PM2.5	1.303		
Pb	0.000		
NH3	0.003		
CO2e	3179.0		

2030 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000	100	No
PM10	0.000		
PM2.5	0.000	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	0.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR § 93.153(b); therefore, the requirements of the General Conformity Rule are not applicable.



Isaac Jimenez, Environmental Scientist — 05/29/2019 DATE

KINGSLEY FIELD LOW SCENARIO SUMMARY

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, *Air Quality Compliance And Resource Management*; the Environmental Impact Analysis Process (EIAP, 32 CFR Part 989); and the General Conformity Rule (GCR, 40 CFR Part 93, Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: KINGSLEY FIELD
County(s): Klamath
Regulatory Area(s): Klamath Falls, OR

b. Action Title: Contractor ADAIR Emissions-Airfield Operations

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2019

e. Action Description:

Kingsley airfield operations and emissions.

f. Point of Contact:
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 830-776-2315

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR Part 93, Subpart B.

Based on the analysis, the requirements of this rule are: __X__ applicable
_____ not applicable

Conformity Analysis Summary:

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	12.828	100	No
NOx	6.178	100	No
CO	78.100		
SOx	0.929	100	No
PM10	0.627		
PM2.5	0.603	100	No
Pb	0.000		
NH3	0.003	100	No
CO2e	2013.3		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory CO and PM10			
VOC	12.828		
NOx	6.178		
CO	78.100	100	No
SOx	0.929		
PM10	0.627	100	No
PM2.5	0.603		
Pb	0.000		
NH3	0.003		
CO2e	2013.3		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	25.657	100	No
NOx	12.356	100	No
CO	156.200		
SOx	1.859	100	No
PM10	1.255		
PM2.5	1.205	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	4026.5		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	25.657		
NOx	12.356		
CO	156.200	100	Yes
SOx	1.859		
PM10	1.255	100	No
PM2.5	1.205		
Pb	0.000		
NH3	0.007		
CO2e	4026.5		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	25.657	100	No
NOx	12.356	100	No
CO	156.200		
SOx	1.859	100	No
PM10	1.255		
PM2.5	1.205	100	No
Pb	0.000		
NH3	0.007	100	No

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
CO2e	4026.5		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	25.657		
NOx	12.356		
CO	156.200	100	Yes
SOx	1.859		
PM10	1.255	100	No
PM2.5	1.205		
Pb	0.000		
NH3	0.007		
CO2e	4026.5		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	25.657	100	No
NOx	12.356	100	No
CO	156.200		
SOx	1.859	100	No
PM10	1.255		
PM2.5	1.205	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	4026.5		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	25.657		
NOx	12.356		
CO	156.200	100	Yes
SOx	1.859		
PM10	1.255	100	No
PM2.5	1.205		
Pb	0.000		
NH3	0.007		
CO2e	4026.5		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	25.657	100	No
NOx	12.356	100	No
CO	156.200		
SOx	1.859	100	No
PM10	1.255		
PM2.5	1.205	100	No
Pb	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NH3	0.007	100	No
CO2e	4026.5		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	25.657		
NOx	12.356		
CO	156.200	100	Yes
SOx	1.859		
PM10	1.255	100	No
PM2.5	1.205		
Pb	0.000		
NH3	0.007		
CO2e	4026.5		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	25.657	100	No
NOx	12.356	100	No
CO	156.200		
SOx	1.859	100	No
PM10	1.255		
PM2.5	1.205	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	4026.5		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	25.657		
NOx	12.356		
CO	156.200	100	Yes
SOx	1.859		
PM10	1.255	100	No
PM2.5	1.205		
Pb	0.000		
NH3	0.007		
CO2e	4026.5		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	25.657	100	No
NOx	12.356	100	No
CO	156.200		
SOx	1.859	100	No
PM10	1.255		
PM2.5	1.205	100	No

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Pb	0.000		
NH3	0.007	100	No
CO2e	4026.5		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	25.657		
NOx	12.356		
CO	156.200	100	Yes
SOx	1.859		
PM10	1.255	100	No
PM2.5	1.205		
Pb	0.000		
NH3	0.007		
CO2e	4026.5		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	25.657	100	No
NOx	12.356	100	No
CO	156.200		
SOx	1.859	100	No
PM10	1.255		
PM2.5	1.205	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	4026.5		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	25.657		
NOx	12.356		
CO	156.200	100	Yes
SOx	1.859		
PM10	1.255	100	No
PM2.5	1.205		
Pb	0.000		
NH3	0.007		
CO2e	4026.5		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	25.657	100	No
NOx	12.356	100	No
CO	156.200		
SOx	1.859	100	No
PM10	1.255		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM2.5	1.205	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	4026.5		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	25.657		
NOx	12.356		
CO	156.200	100	Yes
SOx	1.859		
PM10	1.255	100	No
PM2.5	1.205		
Pb	0.000		
NH3	0.007		
CO2e	4026.5		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	25.657	100	No
NOx	12.356	100	No
CO	156.200		
SOx	1.859	100	No
PM10	1.255		
PM2.5	1.205	100	No
Pb	0.000		
NH3	0.007	100	No
CO2e	4026.5		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	25.657		
NOx	12.356		
CO	156.200	100	Yes
SOx	1.859		
PM10	1.255	100	No
PM2.5	1.205		
Pb	0.000		
NH3	0.007		
CO2e	4026.5		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	12.828	100	No
NOx	6.178	100	No
CO	78.100		
SOx	0.929	100	No

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM10	0.627		
PM2.5	0.603	100	No
Pb	0.000		
NH3	0.003	100	No
CO2e	2013.3		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	12.828		
NOx	6.178		
CO	78.100	100	No
SOx	0.929		
PM10	0.627	100	No
PM2.5	0.603		
Pb	0.000		
NH3	0.003		
CO2e	2013.3		

2030 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Klamath Falls, OR, Regulatory PM2.5			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000	100	No
PM10	0.000		
PM2.5	0.000	100	No
Pb	0.000		
NH3	0.000	100	No
CO2e	0.0		
Klamath Falls, OR, Regulatory CO and PM10			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

Some estimated emissions associated with this action are above the conformity threshold values established at 40 CFR § 93.153(b); therefore, the requirements of the General Conformity Rule are applicable.

Isaac Jimenez, Environmental Scientist — 05/29/2019 DATE

JUNIPER/HART MOA HIGH SCENARIO SUMMARY

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, *Air Quality Compliance And Resource Management*; the Environmental Impact Analysis Process (EIAP, 32 CFR Part 989); and the General Conformity Rule (GCR, 40 CFR Part 93, Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: KINGSLEY FIELD
County(s): Deschutes; Crook; Lake; Harney
Regulatory Area(s): NOT IN A REGULATORY AREA; Lake Co, OR

b. Action Title: Juniper Hart Emissions

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2019

e. Action Description:

Getting the emissions for the warning areas below 3,000 ft.

f. Point of Contact:
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 8307762315

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR Part 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.145		
NOx	27.689		
CO	0.736		
SOx	1.083		
PM10	0.736		
PM2.5	0.662		
Pb	0.000		
NH3	0.000		
CO2e	3305.5		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Lake Co, OR			
VOC	0.145		
NOx	27.689		
CO	0.736		
SOx	1.083		
PM10	0.736	100	No
PM2.5	0.662		
Pb	0.000		
NH3	0.000		
CO2e	3305.5		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472		
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		
Lake Co, OR			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472	100	No
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472		
PM2.5	1.325		
Pb	0.000		
NH3	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
CO2e	6611.0		
Lake Co, OR			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472	100	No
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472		
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		
Lake Co, OR			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472	100	No
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472		
PM2.5	1.325		
Pb	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NH3	0.000		
CO2e	6611.0		
Lake Co, OR			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472	100	No
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472		
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		
Lake Co, OR			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472	100	No
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472		
PM2.5	1.325		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Pb	0.000		
NH3	0.000		
CO2e	6611.0		
Lake Co, OR			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472	100	No
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472		
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		
Lake Co, OR			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472	100	No
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		
Lake Co, OR			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472	100	No
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472		
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		
Lake Co, OR			
VOC	0.290		
NOx	55.378		
CO	1.472		
SOx	2.167		
PM10	1.472	100	No
PM2.5	1.325		
Pb	0.000		
NH3	0.000		
CO2e	6611.0		

2029

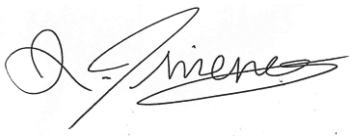
Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.145		
NOx	27.689		
CO	0.736		
SOx	1.083		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM10	0.736		
PM2.5	0.662		
Pb	0.000		
NH3	0.000		
CO2e	3305.5		
Lake Co, OR			
VOC	0.145		
NOx	27.689		
CO	0.736		
SOx	1.083		
PM10	0.736	100	No
PM2.5	0.662		
Pb	0.000		
NH3	0.000		
CO2e	3305.5		

2030 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Lake Co, OR			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR § 93.153(b); therefore, the requirements of the General Conformity Rule are not applicable.



Isaac Jimenez, Environmental Scientist — 05/29/2019 DATE

JUNIPER/HART MOA MEDIUM SCENARIO SUMMARY

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, *Air Quality Compliance And Resource Management*; the Environmental Impact Analysis Process (EIAP, 32 CFR Part 989); and the General Conformity Rule (GCR, 40 CFR Part 93, Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: KINGSLEY FIELD
County(s): Deschutes; Crook; Harney; Lake
Regulatory Area(s): NOT IN A REGULATORY AREA; Lake Co, OR

b. Action Title: Juniper Hart Emissions

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2019

e. Action Description:

Getting the emissions for the warning areas below 3,000 ft.

f. Point of Contact:
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 8307762315

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR Part 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.195		
NOx	8.675		
CO	3.008		
SOx	0.618		
PM10	0.327		
PM2.5	0.213		
Pb	0.000		
NH3	0.000		
CO2e	1895.6		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Lake Co, OR			
VOC	0.195		
NOx	8.675		
CO	3.008		
SOx	0.618		
PM10	0.327	100	No
PM2.5	0.213		
Pb	0.000		
NH3	0.000		
CO2e	1895.6		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653		
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		
Lake Co, OR			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653	100	No
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653		
PM2.5	0.426		
Pb	0.000		
NH3	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
CO2e	3791.2		
Lake Co, OR			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653	100	No
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653		
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		
Lake Co, OR			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653	100	No
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653		
PM2.5	0.426		
Pb	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NH3	0.000		
CO2e	3791.2		
Lake Co, OR			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653	100	No
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653		
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		
Lake Co, OR			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653	100	No
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653		
PM2.5	0.426		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Pb	0.000		
NH3	0.000		
CO2e	3791.2		
Lake Co, OR			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653	100	No
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653		
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		
Lake Co, OR			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653	100	No
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		
Lake Co, OR			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653	100	No
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653		
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		
Lake Co, OR			
VOC	0.391		
NOx	17.351		
CO	6.015		
SOx	1.236		
PM10	0.653	100	No
PM2.5	0.426		
Pb	0.000		
NH3	0.000		
CO2e	3791.2		

2029

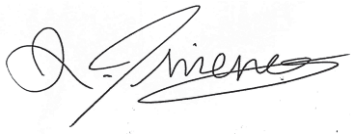
Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.195		
NOx	8.675		
CO	3.008		
SOx	0.618		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM10	0.327		
PM2.5	0.213		
Pb	0.000		
NH3	0.000		
CO2e	1895.6		
Lake Co, OR			
VOC	0.195		
NOx	8.675		
CO	3.008		
SOx	0.618		
PM10	0.327	100	No
PM2.5	0.213		
Pb	0.000		
NH3	0.000		
CO2e	1895.6		

2030 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Lake Co, OR			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR § 93.153(b); therefore, the requirements of the General Conformity Rule are not applicable.



Isaac Jimenez, Environmental Scientist — 05/29/2019 DATE

JUNIPER/HART MOA LOW SCENARIO SUMMARY

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, *Air Quality Compliance And Resource Management*; the Environmental Impact Analysis Process (EIAP, 32 CFR Part 989); and the General Conformity Rule (GCR, 40 CFR Part 93, Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: KINGSLEY FIELD
County(s): Crook; Deschutes; Harney; Lake
Regulatory Area(s): NOT IN A REGULATORY AREA; Lake Co, OR

b. Action Title: Juniper Hart Emissions

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2019

e. Action Description:

Getting the emissions for the warning areas below 3,000 ft.

f. Point of Contact:
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 8307762315

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR Part 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.189		
NOx	0.680		
CO	12.708		
SOx	0.313		
PM10	0.003		
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	955.7		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Lake Co, OR			
VOC	1.189		
NOx	0.680		
CO	12.708		
SOx	0.313		
PM10	0.003	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	955.7		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007		
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		
Lake Co, OR			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007	100	No
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007		
PM2.5	0.006		
Pb	0.000		
NH3	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
CO2e	1911.5		
Lake Co, OR			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007	100	No
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007		
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		
Lake Co, OR			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007	100	No
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007		
PM2.5	0.006		
Pb	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NH3	0.000		
CO2e	1911.5		
Lake Co, OR			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007	100	No
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007		
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		
Lake Co, OR			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007	100	No
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007		
PM2.5	0.006		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Pb	0.000		
NH3	0.000		
CO2e	1911.5		
Lake Co, OR			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007	100	No
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007		
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		
Lake Co, OR			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007	100	No
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		
Lake Co, OR			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007	100	No
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007		
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		
Lake Co, OR			
VOC	2.379		
NOx	1.359		
CO	25.415		
SOx	0.627		
PM10	0.007	100	No
PM2.5	0.006		
Pb	0.000		
NH3	0.000		
CO2e	1911.5		

2029

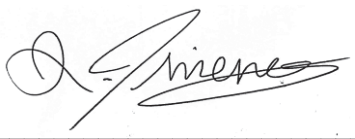
Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.189		
NOx	0.680		
CO	12.708		
SOx	0.313		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM10	0.003		
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	955.7		
Lake Co, OR			
VOC	1.189		
NOx	0.680		
CO	12.708		
SOx	0.313		
PM10	0.003	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	955.7		

2030 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Lake Co, OR			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR § 93.153(b); therefore, the requirements of the General Conformity Rule are not applicable.



Isaac Jimenez, Environmental Scientist — 05/29/2019 DATE

W-93 HIGH SCENARIO SUMMARY

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, *Air Quality Compliance And Resource Management*; the Environmental Impact Analysis Process (EIAP, 32 CFR Part 989); and the General Conformity Rule (GCR, 40 CFR Part 93, Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: KINGSLEY FIELD
County(s): Crook; Deschutes; Harney; Lake
Regulatory Area(s): NOT IN A REGULATORY AREA; Lake Co, OR

b. Action Title: Warning Area 93 emissions

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2019

e. Action Description:

ADAIR emissions

f. Point of Contact:
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 8307762315

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR Part 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.001		
NOx	0.198		
CO	0.005		
SOx	0.008		
PM10	0.005		
PM2.5	0.005		
Pb	0.000		
NH3	0.000		
CO2e	23.6		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Lake Co, OR			
VOC	0.001		
NOx	0.198		
CO	0.005		
SOx	0.008		
PM10	0.005	100	No
PM2.5	0.005		
Pb	0.000		
NH3	0.000		
CO2e	23.6		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011		
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		
Lake Co, OR			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011	100	No
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011		
PM2.5	0.009		
Pb	0.000		
NH3	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
CO2e	47.2		
Lake Co, OR			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011	100	No
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011		
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		
Lake Co, OR			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011	100	No
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011		
PM2.5	0.009		
Pb	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NH3	0.000		
CO2e	47.2		
Lake Co, OR			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011	100	No
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011		
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		
Lake Co, OR			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011	100	No
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011		
PM2.5	0.009		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Pb	0.000		
NH3	0.000		
CO2e	47.2		
Lake Co, OR			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011	100	No
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011		
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		
Lake Co, OR			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011	100	No
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		
Lake Co, OR			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011	100	No
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011		
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		
Lake Co, OR			
VOC	0.002		
NOx	0.396		
CO	0.011		
SOx	0.015		
PM10	0.011	100	No
PM2.5	0.009		
Pb	0.000		
NH3	0.000		
CO2e	47.2		

2029

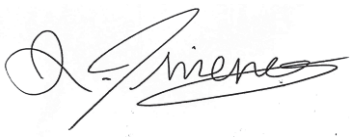
Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.001		
NOx	0.198		
CO	0.005		
SOx	0.008		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM10	0.005		
PM2.5	0.005		
Pb	0.000		
NH3	0.000		
CO2e	23.6		
Lake Co, OR			
VOC	0.001		
NOx	0.198		
CO	0.005		
SOx	0.008		
PM10	0.005	100	No
PM2.5	0.005		
Pb	0.000		
NH3	0.000		
CO2e	23.6		

2030 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Lake Co, OR			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR § 93.153(b); therefore, the requirements of the General Conformity Rule are not applicable.



Isaac Jimenez, Environmental Scientist — 05/29/2019 DATE

W-93 MEDIUM SCENARIO SUMMARY

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, *Air Quality Compliance And Resource Management*; the Environmental Impact Analysis Process (EIAP, 32 CFR Part 989); and the General Conformity Rule (GCR, 40 CFR Part 93, Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: KINGSLEY FIELD
County(s): Crook; Harney; Deschutes; Lake
Regulatory Area(s): NOT IN A REGULATORY AREA; Lake Co, OR

b. Action Title: Warning Area 93 emissions

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2019

e. Action Description:

ADAIR emissions

f. Point of Contact:
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 8307762315

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR Part 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.001		
NOx	0.062		
CO	0.021		
SOx	0.004		
PM10	0.002		
PM2.5	0.002		
Pb	0.000		
NH3	0.000		
CO2e	13.5		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Lake Co, OR			
VOC	0.001		
NOx	0.062		
CO	0.021		
SOx	0.004		
PM10	0.002	100	No
PM2.5	0.002		
Pb	0.000		
NH3	0.000		
CO2e	13.5		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005		
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		
Lake Co, OR			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005		
PM2.5	0.003		
Pb	0.000		
NH3	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
CO2e	27.1		
Lake Co, OR			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005		
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		
Lake Co, OR			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005		
PM2.5	0.003		
Pb	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NH3	0.000		
CO2e	27.1		
Lake Co, OR			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005		
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		
Lake Co, OR			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005		
PM2.5	0.003		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Pb	0.000		
NH3	0.000		
CO2e	27.1		
Lake Co, OR			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005		
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		
Lake Co, OR			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		
Lake Co, OR			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005		
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		
Lake Co, OR			
VOC	0.003		
NOx	0.124		
CO	0.043		
SOx	0.009		
PM10	0.005	100	No
PM2.5	0.003		
Pb	0.000		
NH3	0.000		
CO2e	27.1		

2029

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.001		
NOx	0.062		
CO	0.021		
SOx	0.004		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM10	0.002		
PM2.5	0.002		
Pb	0.000		
NH3	0.000		
CO2e	13.5		
Lake Co, OR			
VOC	0.001		
NOx	0.062		
CO	0.021		
SOx	0.004		
PM10	0.002	100	No
PM2.5	0.002		
Pb	0.000		
NH3	0.000		
CO2e	13.5		

2030 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Lake Co, OR			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR § 93.153(b); therefore, the requirements of the General Conformity Rule are not applicable.

Isaac Jimenez, Environmental Scientist — 05/29/2019 DATE

W-93 LOW SCENARIO SUMMARY

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, *Air Quality Compliance And Resource Management*; the Environmental Impact Analysis Process (EIAP, 32 CFR Part 989); and the General Conformity Rule (GCR, 40 CFR Part 93, Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:
Base: KINGSLEY FIELD
County(s): Crook; Deschutes; Harney; Lake
Regulatory Area(s): NOT IN A REGULATORY AREA; Lake Co, OR

b. Action Title: Warning Area 93 emissions

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2019

e. Action Description:

ADAIR emissions

f. Point of Contact:
Name: Isaac Jimenez
Title: Environmental Scientist
Organization: Versar
Email: ijimenez@versar.com
Phone Number: 8307762315

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR Part 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2019

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.008		
NOx	0.005		
CO	0.091		
SOx	0.002		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	6.8		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Lake Co, OR			
VOC	0.008		
NOx	0.005		
CO	0.091		
SOx	0.002		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	6.8		

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		
Lake Co, OR			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
CO2e	13.7		
Lake Co, OR			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		
Lake Co, OR			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NH3	0.000		
CO2e	13.7		
Lake Co, OR			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		
Lake Co, OR			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000		
PM2.5	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Pb	0.000		
NH3	0.000		
CO2e	13.7		
Lake Co, OR			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		
Lake Co, OR			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		
Lake Co, OR			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		

2028

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		
Lake Co, OR			
VOC	0.017		
NOx	0.010		
CO	0.182		
SOx	0.004		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	13.7		

2029

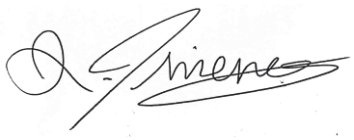
Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.008		
NOx	0.005		
CO	0.091		
SOx	0.002		

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	6.8		
Lake Co, OR			
VOC	0.008		
NOx	0.005		
CO	0.091		
SOx	0.002		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	6.8		

2030 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000		
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Lake Co, OR			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM10	0.000	100	No
PM2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR § 93.153(b); therefore, the requirements of the General Conformity Rule are not applicable.



Isaac Jimenez, Environmental Scientist — 05/29/2019 DATE

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