

AO-3
Aircraft Operations
Emissions Calculations

LANGLEY AFB

		Emissions (tons/year)				
		Annual LTOs	C	VOCs	NOx	SO PM1
Based Aircraft						
C-12	+03	11.0	9.1	0.7	0.1	0.0
C-21	745	3.3	0.9	0.9	0.1	0.0
F-117	227	9.9	4.7	1.5	0.1	0.2
F-15C	+04	128.6	20.6	128.7	4.5	4.8
F-16	264	0.4	0.0	1.2	0.0	0.1
OV-10A	211	0.6	0.2	0.1	0.0	0.0
Trainers (T-38)	634	20.9	2.4	0.4	0.1	0.1
subtotal		13,952				
Transient Aircraft						
Fighter (F-16)	650	0.9	0.1	2.8	0.1	0.1
Helos (UH-1)	146	1.6	0.1	0.2	0.0	0.1
Transport (C-21A)	+03	12.2	3.5	3.2	0.2	0.0
subtotal		3,579				
TOTAL		17,531	189.3	41.7	139.8	5.2 5.3

EGLIN AFB

		Emissions (tons/year)					
		Annual LTOs	C	VOCs	NOx	SO	PM1
Based Aircraft							
A-10A	208	0.1	0.8	0.2	0.0	0.3	
C-130H	624	2.6	1.5	5.2	0.3	0.9	
C-22	186	2.2	0.5	1.3	0.1	0.1	
Civil (DHC-6)	+03	32.7	23.1	3.6	0.4	0.0	
F-15C (F100-PW-100)	+03	82.0	13.1	74.1	2.8	3.3	
F-15C (other than 33rd FW)	+03	20.2	3.2	18.3	0.7	0.8	
F-15E (F100-PW-229)	382	2.3	0.1	4.4	0.2	0.3	
F-16	+03	3.5	0.2	9.3	0.3	0.5	
Helos (UH-1)	312	2.8	0.2	0.4	0.0	0.2	
subtotal	22,013						
Transient Aircraft							
Fighter (F-15C)	+03	28.5	4.5	25.8	1.0	1.1	
Helos (AH-64)	562	1.2	0.0	0.9	0.0	0.2	
Transport (C-130E)	+03	5.9	3.3	11.7	0.6	2.2	
subtotal	5,073						
TOTAL	27,086	183.8	50.7	155.1	6.4	10.0	

ELMENDORF AFB

		Emissions (tons/year)					
		Annual LTOs	C	VOCs	NOx	SO	PM1
Based Aircraft							
	C-12	312	1.6	1.3	0.1	0.0	0.0
	C-130H	+03	11.4	6.8	21.3	2.2	4.1
	E-3A	260	15.3	14.2	2.0	0.3	0.6
	F-15C	+03	74.0	11.9	49.6	4.0	2.8
	F-15E	+03	24.9	1.3	37.5	3.0	3.8
	Trainers (T-38)	+03	27.9	3.8	0.4	0.2	0.1
	subtotal	16,445					
Transient Aircraft							
	Civil (B707)	+03	130.8	112.0	8.3	1.3	1.5
	Fighter (F-16)	234	0.7	0.0	1.0	0.1	0.1
	Transport (C-130E)	+03	3.3	1.9	6.1	0.6	1.2
	subtotal	3,580					
	TOTAL	20,025	289.7	153.3	126.2	11.6	14.2

MOUNTAIN HOME AFB

		Emissions (tons/year)					
		Annual LTOs	C	VOCs	NOx	SO	PM1
Based Aircraft							
	B-1	586	21.8	7.7	12.2	0.8	1.2
	F-15C	+03	33.3	5.3	40.0	1.5	1.3
	F-15E	+03	16.3	1.1	45.2	1.7	2.5
	F-16A	+03	17.7	1.2	49.1	1.8	2.7
	KC-135R	634	31.3	0.3	13.0	1.1	8.3
	Trainers (T-38)	845	30.4	3.4	0.6	0.2	0.2
	subtotal	13,142					
Transient Aircraft							
	Fighter (F-4)	841	67.2	21.7	4.0	0.6	0.5
	Trainers/Civil Surrogate (T-3	413	14.8	1.6	0.3	0.1	0.1
	Transport (C-9A)	366	1.8	0.4	2.7	0.2	0.2
	subtotal	1,620					
	TOTAL	14,762	234.7	42.6	167.2	7.8	16.9

TYNDALL AFB

		Emissions (tons/year)					
		Annual LTOs	C	VOCs	NOx	SO	PM1
Based Aircraft							
	DASH-7	982	1.4	0.2	0.6	0.1	0.0
	E-9	238	0.4	0.0	0.4	0.0	0.0
	F-15	+03	61.6	9.8	54.4	2.1	2.4
	F-16	435	1.3	0.1	2.5	0.1	0.2
	F-22	+04	133.9	21.7	131.7	5.0	10.2
	MU-2	+03	3.1	3.9	0.4	0.0	0.0
	QF-4	600	46.2	15.1	2.1	0.3	0.2
	WSEP A-10	57	0.0	0.2	0.0	0.0	0.1
	WSEP F-14	57	1.1	0.5	0.2	0.0	0.0
	WSEP F-15	+03	14.5	2.3	12.8	0.5	0.6
	WSEP F-16	+03	8.5	0.5	16.4	0.6	1.3
	WSEP F-18	58	1.3	0.6	0.2	0.0	0.0
	subtotal	24,909					
Transient Aircraft							
	Fighter (F-16)	433	1.3	0.1	2.5	0.1	0.2
	Helos (UH-1)	77	0.7	0.1	0.1	0.0	0.0
	Transport (C-130E)	830	2.3	1.3	4.6	0.2	0.9
	subtotal	1,340					
	TOTAL	26,249	277.7	56.4	229.1	9.0	16.1

Baseline Ground Support Equipment Emissions

LANGLEY AFB

Aircraft	Aircraft Type (Assigned GSE)	Annual LTOs	Emissions (tons per year)				
			CO	VOCs	NOx	SOx	PM10
C-12	C-12A/B/C	1,935	59.2	6.1	2.2	0.0	0.2
C-21	C-21-A	745	22.8	2.4	0.9	0.0	0.1
F-117	F-117A	227	5.4	0.7	0.6	0.0	0.0
F-15C	F-15	9,936	03.9	31.6	11.4	0.1	0.8
F-16	F-16 A	264	8.1	0.8	0.3	0.0	0.0
OV-10A	OV-10 BRONCO	211	6.5	0.7	0.2	0.0	0.0
Trainers (T-38)	T-38	634	15.0	1.9	1.8	0.0	0.1
Transport (C-21A)	C-21-A	2,783	85.1	8.8	3.2	0.0	0.2
Fighter (F-16)	F-16 A	650	19.9	2.1	0.7	0.0	0.1
Helos (UH-1)	UH60A/G	146	1.5	0.1	0.0	0.0	0.0
TOTAL		17,531	527.4	55.1	21.5	0.2	1.5

Baseline Ground Support Equipment Emissions

EGLIN AFB

Aircraft	Aircraft Type (Assigned GSE)	Annual LTOs	Emissions (tons per year)				
			CO	VOCs	NOx	SOx	PM10
A-10A	A-10A	208	6.4	0.7	0.2	0.0	0.0
Helos (UH-1)	AH-1	312	3.2	0.2	0.1	0.0	0.0
C-22	B727-100	186	4.1	0.1	0.3	0.0	0.0
C-130H	C-130E HERCULE	624	19.1	2.0	0.7	0.0	0.1
Civil (DHC-6)	DHC-6	9,096	94.0	4.5	18.3	0.4	0.6
F-15E (F100-PW-229)	F-15	382	11.7	1.2	0.4	0.0	0.0
F-15C (F100-PW-100)	F-15	6,912	11.4	22.0	8.0	0.1	0.6
F-15C (other than 33rd FW)	F-15	1,703	52.1	5.4	2.0	0.0	0.1
F-16	F-16 A	2,590	79.2	8.2	3.0	0.0	0.2
Helos (AH-64)	AH-64	562	5.8	0.4	0.1	0.0	0.0
Transport (C-130E)	C-130E HERCULE	2,106	64.4	6.7	2.4	0.0	0.2
Fighter (F-15C)	F-15	2,405	73.6	7.6	2.8	0.0	0.2
TOTAL		27,086	725.0	59.0	38.3	0.7	2.0

Baseline Ground Support Equipment Emissions

ELMENDORF AFB

Aircraft	Aircraft Type (Assigned GSE)	Annual LTOs	Emissions (tons per year)				
			CO	VOCs	NOx	SOx	PM10
E-3A	B707-300	260	5.7	0.1	0.4	0.0	0.0
C-12	C-12A/B/C	312	9.5	1.0	0.4	0.0	0.0
C-130H	C-130 HERCULES	4,524	38.4	14.4	5.2	0.1	0.4
F-15C	F-15	6,048	85.0	19.2	7.0	0.1	0.5
F-15E	F-15	4,261	30.3	13.5	4.9	0.1	0.3
Trainers (T-38)	T-38	1,040	24.7	3.1	2.9	0.0	0.2
Civil (B707)	B707-100	2,056	45.5	1.1	3.4	0.1	0.1
Transport (C-130E)	C-130 HERCULES	1,290	39.5	4.1	1.5	0.0	0.1
Fighter (F-16)	F-16 A	234	7.2	0.7	0.3	0.0	0.0
TOTAL		20,025	585.7	57.3	25.9	0.3	1.7

Baseline Ground Support Equipment Emissions

MOUNTAIN HOME AFB

Aircraft	Aircraft Type (Assigned GSE)	Annual LTOs	Emissions (tons per year)				
			CO	VOCs	NOx	SOx	PM10
B-1	B-1B	586	17.9	1.9	0.7	0.0	0.0
KC-135R	B707-300	634	13.9	0.3	0.9	0.0	0.0
F-15C	F-15	2,592	79.3	8.2	3.0	0.0	0.2
F-15E	F-15	2,677	81.9	8.5	3.1	0.0	0.2
F-16A	F-16 A	5,808	77.7	18.5	6.7	0.1	0.5
Trainers (T-38)	T-38	845	20.0	2.5	2.4	0.0	0.2
Transport (C-9A)	C-9A	366	11.2	1.2	0.4	0.0	0.0
Fighter (F-4)	F-4 PHANTOM II	841	25.7	2.7	1.0	0.0	0.1
Trainers/Civil Surrogate (T-38)	T-38	413	9.8	1.2	1.2	0.0	0.1
TOTAL		14,762	437.4	44.9	19.2	0.2	1.3

Baseline Ground Support Equipment Emissions

TYNDALL AFB

Aircraft	Aircraft Type (Assigned GSE)	Annual LTOs	Emissions (tons per year)				
			CO	VOCs	NOx	SOx	PM10
WSEP A-10	A-10A	57	1.7	0.2	0.1	0.0	0.0
DASH-7	DASH-7	982	20.9	0.5	2.0	0.0	0.1
E-9	DHC-8	238	5.1	0.1	0.5	0.0	0.0
WSEP F-18	F/A-18 HORNET	58	1.8	0.2	0.1	0.0	0.0
WSEP F-14	F-14 TOMCAT	57	1.7	0.2	0.1	0.0	0.0
WSEP F-15	F-15	1,202	36.8	3.8	1.4	0.0	0.1
F-15	F-15	5,097	55.9	16.2	5.9	0.1	0.4
WSEP F-16	F-16 A	2,857	87.4	9.1	3.3	0.0	0.2
F-16	F-16 A	435	13.3	1.4	0.5	0.0	0.0
F-22	F-22	11,326	46.5	36.0	13.1	0.1	0.9
QF-4	F-4 PHANTOM II	600	18.4	1.9	0.7	0.0	0.0
MU-2	MU-2	2,000	0.9	0.2	2.8	0.0	0.1
Helos (UH-1)	AH-1	77	0.8	0.0	0.0	0.0	0.0
Transport (C-130E)	C-130 HERCULES	830	25.4	2.6	1.0	0.0	0.1
Fighter (F-16)	F-16 A	433	13.2	1.4	0.5	0.0	0.0
TOTAL		26,249	729.9	73.8	31.7	0.4	2.0

LANGLEY AFB

	Aircraft	Engine	Sorties (per year)	Emissions						
Baseline	F-15C	F100-PW-100	9,936	Time-in-mode (min)	(tons per year					
					CO	VOCs	NOx	SO2	PM10	
				Approach	4.7	6.3	0.4	25.6	1.0	0.2
				Climbout	1.1	1.5	0.5	61.4	0.8	0.1
				Idle	29.8	110.6	17.8	21.7	2.4	4.4
				Takeoff	0.4	10.1	1.9	20.0	0.3	0.0
					36.0	128.6	20.6	128.7	4.5	4.8
Projected	F-22	F119-PW-100	11,187	Time-in-mode (min)	(tons per year					
					CO	VOCs	NOx	SO2	PM10	
				Approach	4.7	7.1	0.6	40.7	1.2	0.5
				Climbout	1.1	1.7	0.7	70.3	1.1	0.2
				Idle	37.0	154.6	24.8	30.4	3.4	11.8
				Takeoff	0.4	1.2	0.6	25.0	0.4	0.1
					43.2	164.6	26.6	166.2	6.2	12.6

Notes:

1. Approach and Climbout Time-in-Mode account for mixing height of 4,000 feet.
2. Baseline F-15C emissions incorporate base-specific percentage of afterburner takeoffs.
3. Projected F-22 emissions account for 5% afterburner takeoffs.

EGLIN AFB

	Aircraft	Engine	Sorties (per year)	Emissions						
Baseline	F-15C	F100-PW-100	6,912	Time-in-mode (min)	(tons per year					
					CO	VOCs	NOx	SO2	PM10	
				Approach	3.5	3.3	0.2	13.4	0.5	0.1
				Climbout	0.8	0.8	0.3	30.5	0.4	0.0
				Idle	29.8	76.9	12.4	15.1	1.7	3.1
				Takeoff	0.4	1.0	0.2	15.1	0.2	0.0
					34.5	82.0	13.1	74.1	2.8	3.3
Projected	F-22	F119-PW-100	11,187	Time-in-mode (min)	(tons per year					
					CO	VOCs	NOx	SO2	PM10	
				Approach	3.5	5.3	0.4	30.5	0.9	0.4
				Climbout	0.8	1.2	0.5	50.2	0.8	0.2
				Idle	37.0	154.6	24.8	30.4	3.4	11.8
				Takeoff	0.4	1.2	0.6	25.0	0.4	0.1
					41.7	162.4	26.3	136.0	5.6	12.4

Notes:

1. Approach and Climbout Time-in-Mode account for mixing height of 3,000 feet.
2. Baseline F-15C emissions incorporate base-specific percentage of afterburner takeoffs.
3. Projected F-22 emissions account for 5% afterburner takeoffs.

ELMENDORF AFB

	Aircraft	Engine	Sorties (per year)		Emissions (tons per year)					
Baseline	F-15C	F100-PW-100	6,048	Time-in-mode (min)	CO	VOCs	NOx	SO2	PM10	
				Approach	2.3	1.9	0.1	7.8	0.5	0.1
				Climbout	0.5	0.4	0.1	16.0	0.4	0.0
				Idle	29.8	67.3	10.8	13.2	2.7	2.7
				Takeoff	0.4	4.3	0.8	12.5	0.4	0.0
					33.0	74.0	11.9	49.6	4.0	2.8
Projected	F-22	F119-PW-100	11,187	Time-in-mode (min)	CO	VOCs	NOx	SO2	PM10	
				Approach	2.3	3.6	0.3	20.3	1.1	0.2
				Climbout	0.5	0.7	0.3	30.1	0.9	0.1
				Idle	37.0	154.6	24.8	30.4	6.3	11.8
				Takeoff	0.4	1.2	0.6	25.0	0.7	0.1
					40.2	160.1	26.0	105.8	9.0	12.2

Notes:

1. Approach and Climbout Time-in-Mode account for mixing height of 2,000 feet.
2. Baseline F-15C emissions incorporate base-specific percentage of afterburner takeoffs.
3. Projected F-22 emissions account for 5% afterburner takeoffs.

MOUNTAIN HOME

	Aircraft	Engine	Sorties (per year)			Emissions (tons per year)				
Baseline	F-15C	F100-PW-100	2,592		Time-in-mode (min)	CO	VOCs	NOx	SO2	PM10
				Approach	5.8	2.1	0.1	8.3	0.4	0.1
				Climbout	1.4	0.5	0.2	20.6	0.3	0.0
				Idle	29.8	28.8	4.6	5.7	0.7	1.2
				Takeoff	0.4	1.9	0.4	5.4	0.1	0.0
					37.5	33.3	5.3	40.0	1.5	1.3
Projected	F-22	F119-PW-100	11,187		Time-in-mode (min)	CO	VOCs	NOx	SO2	PM10
				Approach	5.8	8.9	0.7	50.8	1.8	0.6
				Climbout	1.4	2.2	0.8	90.4	1.6	0.3
				Idle	37.0	154.6	24.8	30.4	3.9	11.8
				Takeoff	0.4	1.2	0.6	25.0	0.5	0.1
					44.7	166.9	27.0	196.5	7.7	12.8

Notes:

1. Approach and Climbout Time-in-Mode account for mixing height of 5,000 feet.
2. Baseline F-15C emissions incorporate base-specific percentage of afterburner takeoffs.
3. Projected F-22 emissions account for 5% afterburner takeoffs.

TYNDALL AFB

	Aircraft	Engine	Sorties (per year)		Emissions (tons per year)					
Baseline	F-15C	F100-PW-100	0	Time-in-mode (min)	CO	VOCs	NOx	SO2	PM10	
				Approach	3.5	0.0	0.0	0.0	0.0	0.0
				Climbout	0.8	0.0	0.0	0.0	0.0	0.0
				Idle	29.8	0.0	0.0	0.0	0.0	0.0
				Takeoff	0.4	0.0	0.0	0.0	0.0	0.0
					34.5	0.0	0.0	0.0	0.0	0.0
Projected	F-22	F119-PW-100	11,187	Time-in-mode (min)	CO	VOCs	NOx	SO2	PM10	
				Approach	3.5	5.3	0.4	30.5	0.9	0.4
				Climbout	0.8	1.2	0.5	50.2	0.8	0.2
				Idle	37.0	154.6	24.8	30.4	3.4	11.8
				Takeoff	0.4	1.2	0.6	25.0	0.4	0.1
					41.7	162.4	26.3	136.0	5.6	12.4

Notes:

1. Approach and Climbout Time-in-Mode account for mixing height of 3,000 feet.
2. Baseline F-15C emissions incorporate base-specific percentage of afterburner takeoffs.
3. Projected F-22 emissions account for 5% afterburner takeoffs.

**ACTION RELATED
BASELINE AND PROJECTED GSE EMISSIONS**

LANGLEY AFB			Annual LTOs	Emissions (tons per year)				
				CO	VOCs	NOx	SO2	PM10
Baseline	F-15C		9,936	3.9	31.6	11.4	0.12	0.8
Projected	F-22		11,187	2.2	35.5	12.9	0.14	0.9
EGLIN AFB			Annual LTOs	Emissions (tons per year)				
				CO	VOCs	NOx	SO2	PM10
Baseline	F-15C		6,912	1.4	22.0	8.0	0.09	0.6
Projected	F-22		11,187	2.2	35.5	12.9	0.14	0.9
ELMENDORF AFB			Annual LTOs	Emissions (tons per year)				
				CO	VOCs	NOx	SO2	PM10
Baseline	F-15C		6,048	5.0	19.2	7.0	0.07	0.5
Projected	F-22		11,187	2.2	35.5	12.9	0.14	0.9
MOUNTAIN HOME AFB			Annual LTOs	Emissions (tons per year)				
				CO	VOCs	NOx	SO2	PM10
Baseline	F-15C		2,592	9.3	8.2	3.0	0.03	0.2
Projected	F-22		11,187	2.2	35.5	12.9	0.14	0.9
TYNDALL AFB			Annual LTOs	Emissions (tons per year)				
				CO	VOCs	NOx	SO2	PM10
Baseline	F-15C		0	0.0	0.0	0.0	0.00	0.0
Projected	F-22		11,187	2.2	35.5	12.9	0.14	0.9

LANGLEY AFB

Engine Test Cells

Baseline

F100-PW-100 209 Tests/year

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	15.0	0.2	0.1	8.7	0.01	.01
Intermediate	1.5	0.0	0.0	0.7	0.00	.00
Idle	45.0	1.8	0.3	0.3	0.00	.07
Afterburner	3.0	1.4	0.3	1.5	0.00	.00
Total	64.5	3.4	0.6	11.1	0.02	.08

Proposed

F119-PW-100 103 Tests/year

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	3.9	0.0	0.0	1.1	0.00	.00
Intermediate	2.3	0.0	0.0	0.5	0.00	.00
Idle	22.3	0.4	0.1	0.1	0.00	.03
Afterburner	0.6	0.2	0.1	0.2	0.00	.00
Total	29.1	0.7	0.1	1.9	0.00	.04

LANGLEY AFB

Maintenance Run-ups/Trim Checks

Baseline

F100-PW-100 1584 Tests/year

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	6.0	1.3	0.4	52.5	0.07	.07
Intermediate	1.2	0.3	0.1	8.3	0.01	.01
Idle	51.0	30.2	4.8	5.9	0.07	.21
Afterburner	1.8	12.5	2.3	13.3	0.03	.00
Total	60.0	44.2	7.7	80.0	0.17	1.3

Proposed

F119-PW-100 72 Tests/year

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	6.8	0.1	0.0	2.7	0.00	.01
Intermediate	0.1	0.0	0.0	0.0	0.00	.00
Idle	66.0	1.8	0.3	0.3	0.00	.14
Afterburner	1.3	0.7	0.1	0.5	0.00	.00
Total	74.2	2.5	0.5	3.6	0.01	0.1

Run-ups for all F-22 maintenance are aggregated into a single test per aircraft per year. The F-22 does not perform trim checks.

EGLIN AFB

Engine Test Cells

Baseline

F100-PW-100		145	Tests/year				
Power Setting	Time in Mode (min)	Emissions (tons per year)					
		CO	VOCs	NOx	SO2	PM10	
Military	15.0	0.1	0.1	6.0	0.01	.01	
Intermediate	1.5	0.0	0.0	0.5	0.00	.00	
Idle	45.0	1.2	0.2	0.2	0.00	.05	
Afterburner	3.0	1.0	0.2	1.0	0.00	.00	
Total	64.5	2.3	0.4	7.7	0.01	.06	

Proposed

F119-PW-100		103	Tests/year				
Power Setting	Time in Mode (min)	Emissions (tons per year)					
		CO	VOCs	NOx	SO2	PM10	
Military	3.9	0.0	0.0	1.1	0.00	.00	
Intermediate	2.3	0.0	0.0	0.5	0.00	.00	
Idle	22.3	0.4	0.1	0.1	0.00	.03	
Afterburner	0.6	0.2	0.1	0.2	0.00	.00	
Total	29.1	0.7	0.1	1.9	0.00	.04	

EGLIN AFB

Maintenance Run-ups/Trim Checks

Baseline

F100-PW-100		1152	Tests/year				
Power Setting	Time in Mode (min)	Emissions (tons per year)					
		CO	VOCs	NOx	SO2	PM10	
Military	6.0	1.0	0.3	38.2	0.05	.05	
Intermediate	1.2	0.2	0.1	6.0	0.01	.01	
Idle	51.0	21.9	3.5	4.3	0.05	.88	
Afterburner	1.8	9.1	1.7	9.6	0.02	.00	
Total	60.0	32.2	5.6	58.1	0.12	0.9	

Proposed

F119-PW-100		72	Tests/year				
Power Setting	Time in Mode (min)	Emissions (tons per year)					
		CO	VOCs	NOx	SO2	PM10	
Military	6.8	0.1	0.0	2.7	0.00	.01	
Intermediate	0.1	0.0	0.0	0.0	0.00	.00	
Idle	66.0	1.8	0.3	0.3	0.00	.14	
Afterburner	1.3	0.7	0.1	0.5	0.00	.00	
Total	74.2	2.5	0.5	3.6	0.01	0.1	

Run-ups for all F-22 maintenance are aggregated into a single test per aircraft per year. The F-22 does not perform trim checks.

ELMENDORF AFB

Engine Test Cells

Baseline

F100-PW-100		127	Tests/year				
Power Setting	Time in Mode (min)	Emissions (tons per year)					
		CO	VOCs	NOx	SO2	PM10	
Military	15.0	0.1	0.0	5.3	0.01	.01	
Intermediate	1.5	0.0	0.0	0.4	0.00	.00	
Idle	45.0	1.1	0.2	0.2	0.00	.04	
Afterburner	3.0	0.8	0.2	0.9	0.00	.00	
Total	64.5	2.0	0.4	6.8	0.02	.05	

Proposed

F119-PW-100		103	Tests/year				
Power Setting	Time in Mode (min)	Emissions (tons per year)					
		CO	VOCs	NOx	SO2	PM10	
Military	3.9	0.0	0.0	1.1	0.00	.00	
Intermediate	2.3	0.0	0.0	0.5	0.00	.00	
Idle	22.3	0.4	0.1	0.1	0.00	.03	
Afterburner	0.6	0.2	0.1	0.2	0.00	.00	
Total	29.1	0.7	0.1	1.9	0.01	.04	

ELMENDORF AFB

Maintenance Run-ups/Trim Checks

Baseline

F100-PW-100		1056 Tests/year					
Power Setting	Time in Mode (min)	Emissions (tons per year)					
		CO	VOCs	NOx	SO2	PM10	
Military	6.0	0.9	0.3	35.0	0.08	.05	
Intermediate	1.2	0.2	0.1	5.5	0.01	.01	
Idle	51.0	20.1	3.2	3.9	0.08	.81	
Afterburner	1.8	8.3	1.5	8.8	0.03	.00	
Total	60.0	29.5	5.1	53.3	0.21	0.9	

Proposed

F119-PW-100		72 Tests/year					
Power Setting	Time in Mode (min)	Emissions (tons per year)					
		CO	VOCs	NOx	SO2	PM10	
Military	6.8	0.1	0.0	2.7	0.01	.01	
Intermediate	0.1	0.0	0.0	0.0	0.00	.00	
Idle	66.0	1.8	0.3	0.3	0.01	.14	
Afterburner	1.3	0.7	0.1	0.5	0.00	.00	
Total	74.2	2.5	0.5	3.6	0.02	0.1	

Run-ups for all F-22 maintenance are aggregated into a single test per aircraft per year. The F-22 does not perform trim checks.

MOUNTAIN HOME AFB

Engine Test Cells

Baseline

F100-PW-100

55 *Tests/year*

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	15.0	0.1	0.0	2.3	0.00	.00
Intermediate	1.5	0.0	0.0	0.2	0.00	.00
Idle	45.0	0.5	0.1	0.1	0.00	.02
Afterburner	3.0	0.4	0.1	0.4	0.00	.00
Total	64.5	0.9	0.2	2.9	0.01	.02

Proposed

F119-PW-100

103 *Tests/year*

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	3.9	0.0	0.0	1.1	0.00	.00
Intermediate	2.3	0.0	0.0	0.5	0.00	.00
Idle	22.3	0.4	0.1	0.1	0.00	.03
Afterburner	0.6	0.2	0.1	0.2	0.00	.00
Total	29.1	0.7	0.1	1.9	0.00	.04

MOUNTAIN HOME AFB

Maintenance Run-ups/Trim Checks

Baseline

F100-PW-100 432 Tests/year

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	6.0	0.4	0.1	14.3	0.02	.02
Intermediate	1.2	0.1	0.0	2.3	0.00	.00
Idle	51.0	8.2	1.3	1.6	0.02	.33
Afterburner	1.8	3.4	0.6	3.6	0.01	.00
Total	60.0	12.1	2.1	21.8	0.05	0.4

Proposed

F119-PW-100 72 Tests/year

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	6.8	0.1	0.0	2.7	0.00	.01
Intermediate	0.1	0.0	0.0	0.0	0.00	.00
Idle	66.0	1.8	0.3	0.3	0.00	.14
Afterburner	1.3	0.7	0.1	0.5	0.00	.00
Total	74.2	2.5	0.5	3.6	0.01	0.1

Run-ups for all F-22 maintenance are aggregated into a single test per aircraft per year. The F-22 does not perform trim checks.

TYNDALL AFB

Engine Test Cells

Proposed

F119-PW-100

103

Tests/year

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	3.9	0.0	0.0	1.1	0.00	.00
Intermediate	2.3	0.0	0.0	0.5	0.00	.00
Idle	22.3	0.4	0.1	0.1	0.00	.03
Afterburner	0.6	0.2	0.1	0.2	0.00	.00
Total	29.1	0.7	0.1	1.9	0.00	.04

TYNDALL AFB

Maintenance Run-ups/Trim Checks

Baseline

F100-PW-100 0 *Tests/year*

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	6.8	0.0	0.0	0.0	0.00	.00
Intermediate	0.1	0.0	0.0	0.0	0.00	.00
Idle	66.0	0.0	0.0	0.0	0.00	.00
Afterburner	1.3	0.0	0.0	0.0	0.00	.00
Total	74.2	0.0	0.0	0.0	0.00	0

Proposed

F119-PW-100 72 *Tests/year*

Power Setting	Time in Mode (min)	Emissions (tons per year)				
		CO	VOCs	NOx	SO2	PM10
Military	6.8	0.1	0.0	2.7	0.00	.01
Intermediate	0.1	0.0	0.0	0.0	0.00	.00
Idle	66.0	1.8	0.3	0.3	0.00	.14
Afterburner	1.3	0.7	0.1	0.5	0.00	.00
Total	74.2	2.5	0.5	3.6	0.01	0.1

Run-ups for all F-22 maintenance are aggregated into a single test per aircraft per year. The F-22 does not perform trim checks.

LANGLEY AFB**Farmville MOA****Baseline**

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	8	100	0.05	0.008	0.13	.0006	0.01
F-18	8	100	0.06	0.005	1.07	0.002	0.03
F-14	4	100	0.04	0.002	0.33	.0009	0.006
F-15C (other)	34	100	0.19	0.06	7.51	0.01	0.01
F-15C	555	100	3.06	1.03	123	0.16	0.17
F-16	10	100	0.01	0.01	1.12	0.002	0.004
Totals:	619	---	3.4	1.1	130	0.2	0.2

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	0	100	0	0	0	0	0
F-18	24	100	0.18	0.01	3.2	0.006	0.09
F-14	0	100	0	0	0	0	0
F-15E	414	100	1.06	0.87	92.9	0.15	0.32
F-16	94	100	0.12	0.1	10.5	0.02	0.04
F-22	317	100	1.75	0.66	71.1	0.11	0.24
Totals:	849	---	3.1	1.6	180	0.3	0.7

LANGLEY AFB**W-107****Baseline**

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	469	95	1.35	0.23	3.56	0.02	0.38
E-3	234	0	0	0	0	0	0
F-15C	29	11	0.009	0.003	0.35	.0005	.0005
F-16	704	20	0.09	0.07	7.9	0.01	0.03
KC-10	59	0	0	0	0	0	0
KC-135	59	0	0	0	0	0	0
LR-35	199	17	0.05	0.003	0.30	0.001	0
LR-36	199	17	0.05	0.003	0.30	0.001	0
P-3	398	17	0.35	0.07	1.91	0.007	0.14
U-2	23	0	0		0	0	0
Totals:	2373	---	1.9	0.4	14	0.04	0.5

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	469	95	1.35	0.23	3.56	0.02	0.38
E-3	234	0	0	0	0	0	0
F-16	704	20	0.09	0.07	7.9	0.01	0.03
F-22	41	5	0.006	0.002	0.23	.0004	.0008
KC-10	59	0	0	0	0	0	0
KC-135	59	0	0	0	0	0	0
LR-36	199	17	0.05	0.003	0.30	0.001	0
LR-35	199	17	0.05	0.003	0.30	0.001	0
P-3	398	17	0.35	0.07	1.91	0.007	0.14
U-2	23	0	0		0	0	0
Totals:	2385	---	1.9	0.4	14	0.04	0.5

LANGLEY AFB

W-110

Baseline

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
AV-8	71	17	0.003	.0001	0.02	1E-04	0
Other Commercial (B737)	17	0	0	0	0	0	0
C-130	9	80	0.02	0.005	0.14	.0005	0.01
USCG (assume C-130)	2	80	0.006	0.001	0.03	.0001	0.002
EA-6B	32	12	0.01	0.002	0.03	.0002	0
F-18	25	17	0.008	.0006	0.14	.0003	0.004
F-14	13	11	0.004	.0002	0.03	8E-05	.0005
F-15C	7	11	0.001	.0004	0.04	5E-05	6E-05
AF (assume F-16)	109	17	0.006	0.005	0.52	.0008	0.002
Navy (assume P-3)	13	17	0.008	0.001	0.04	.0002	0.003
Totals:	298	---	0.07	0.02	1	.002	0.02

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
AV-8	71	17	0.003	.0001	0.02	1E-04	0
Commercial (assume B737)	17	0	0	0	0	0	0
USCG (assume C-130)	2	80	0.006	0.001	0.03	.0001	0.002
C-130	9	80	0.01	0.002	0.07	.0002	0.005
EA-6B	32	12	0.01	0.002	0.03	.0002	0
F-18	25	17	0.008	.0006	0.14	.0003	0.004
F-14	13	11	0.004	.0002	0.03	8E-05	.0005
AF (assume F-16)	109	17	0.006	0.005	0.52	.0008	0.002
F-22	10	5	0.001	.0005	0.06	9E-05	.0002
Navy (assume P-3)	13	17	0.008	0.001	0.04	.0002	0.003
Totals:	301	---	0.06	0.01	0.9	.002	0.02

LANGLEY AFB

W-122

Baseline	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
AV-8	3472	17	0.27	0.01	2.37	0.01	0
Other Commercial (B737)	880	0	0	0	0	0	0
USCG (assume C-130)	44	80	0.37	0.07	1.98	0.007	0.14
KC-130	375	80	3.12	0.6	16.9	0.06	1.21
EA-6B	1625	12	3.57	0.75	9.42	0.05	0
F-18	1200	17	0.78	0.06	13.6	0.02	0.38
F-14	634	11	0.36	0.02	2.86	0.008	0.05
F-15C	428	11	0.13	0.04	5.2	0.007	0.007
AF (assume F-16)	5331	17	0.58	0.47	50.8	0.08	0.17
Navy (assume P-3)	636	17	0.56	0.11	3.05	0.01	0.22
Totals:	14625	---	9.7	2.1	110	0.3	2.2
Projected	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
AV-8	3472	17	0.27	0.01	2.37	0.01	0
Other commercial (B737)	880	0	0	0	0	0	0
KC-130	375	80	3.12	0.6	16.9	0.06	1.21
ASCG (assume C-130)	44	80	0.37	0.07	1.98	0.007	0.14
EA-6B	1625	12	3.57	0.75	9.42	0.05	0
F-18	1200	17	0.78	0.06	13.6	0.02	0.38
F-14	634	11	0.36	0.02	2.86	0.008	0.05
AF (assume F-16)	5331	17	0.58	0.47	50.8	0.08	0.17
F-22	601	5	0.08	0.03	3.37	0.005	0.01
Navy (assume P-3)	636	17	1.12	0.22	6.1	0.02	0.43
Totals:	14798	---	10	2.2	110	0.3	2.4

LANGLEY AFB

W-386

Baseline

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
Other commercial (B737)	951	0	0	0	0	0	0
USCG (assume C-130)	43	80	0.36	0.07	1.94	0.007	0.14
F-18	865	17	0.98	0.08	17.1	0.03	0.48
F-14	1990	11	1.98	0.08	15.7	0.04	0.28
F-15C	3598	11	1.91	0.64	76.5	0.1	0.10
AF (assume F-16)	847	17	0.16	0.13	14.1	0.02	0.05
Navy (assume P-3)	979	17	1.01	0.19	5.47	0.02	0.39
Totals:	9273	---	6.4	1.2	130	0.2	1.4

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
Other Commercial (B737)	951	0	0	0	0	0	0
USCG (assume C-130)	43	80	0.36	0.07	1.94	0.007	0.14
F-18	865	17	0.98	0.08	17.1	0.03	0.48
F-14	1990	11	1.98	0.08	15.7	0.04	0.28
AF (assume F-16)	847	17	0.16	0.13	14.1	0.02	0.05
F-22	5512	5	1.33	0.50	54.1	0.08	0.18
Navy (assume P-3)	979	17	1.01	0.19	5.47	0.02	0.39
Totals:	11187	---	5.8	1.1	110	0.2	1.5

LANGLEY AFB

W-387

Baseline

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
Other commercial (assume B737)	131	0	0	0	0	0	0
USCG (assume C-130)	9	80	0.04	0.007	0.20	.0007	0.01
F-18	116	17	0.08	0.006	1.31	0.002	0.04
F-14	270	11	0.15	0.007	1.22	0.003	0.02
F-15C	306	0	0	0	0	0	0
AF (assume F-16)	116	17	0.01	0.01	1.11	0.002	0.004
Navy (assume P-3)	131	17	0.08	0.01	0.42	0.002	0.03
Totals:	1079	---	0.4	0.04	4.3	0.01	0.1

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
Other Commercial (B737)	131	0	0	0	0	0	0
USCG (assume C-130)	9	80	0.04	0.007	0.20	.0007	0.01
F-18	116	17	0.08	0.006	1.31	0.002	0.04
F-14	270	11	0.15	0.007	1.22	0.003	0.02
AF (assume F-16)	116	17	0.01	0.01	1.11	0.002	0.004
F-22	430	0	0	0	0	0	0
Navy (assume P-3)	131	17	0.08	0.01	0.42	0.002	0.03
Totals:	1203	---	0.4	0.04	4.3	0.01	0.1

LANGLEY AFB

W-72

Baseline

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
Other Commercial (B737)	947	0	0	0	0	0	0
KC-130	4	80	0.03	0.006	0.18	.0007	0.01
USCG (assume C-130)	79	80	0.66	0.13	3.56	0.01	0.25
F-18	13277	17	12.9	1.03	226	0.40	6.3
Advesary (assume F-18)	2287	17	2.23	0.18	38.9	0.07	1.08
F-14	9296	11	7.94	0.34	63	0.17	1.11
F-15C	2640	11	1.20	0.40	48.1	0.06	0.07
AF (assume F-16)	758	17	0.12	0.10	10.8	0.02	0.04
Navy (assume P-3)	2975	17	2.63	0.51	14.3	0.05	1.02
Totals:	32263	---	28	2.7	400	0.8	9.9

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
Other commercial (B737)	947	0	0	0	0	0	0
USCG (assume C-130)	79	80	0.66	0.13	3.56	0.01	0.25
KC-130	4	80	0.03	0.006	0.18	.0007	0.01
Advesary (assume F-18)	2287	17	2.23	0.18	38.9	0.07	1.08
F-18	13277	17	12.9	1.03	226	0.40	6.3
F-14	9296	11	7.94	0.34	63	0.17	1.11
AF (assume F-16)	758	17	0.12	0.10	10.8	0.02	0.04
F-22	3706	5	0.77	0.29	31.2	0.05	0.11
Navy (assume P-3)	2975	80	12.4	2.38	67.1	0.25	4.78
Totals:	33329	---	37	4.4	440	1	14

EGLIN AFB

Camden Ridge/Pine Hill MOAs

Baseline	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	177	100	1.07	0.18	2.82	0.01	0.30
F-15C (Eglin)	300	85	1.41	0.47	56.3	0.07	0.08
F-16	2885	85	3.14	2.57	275	0.43	0.94
KC-135	23	19	0.01	0.02	0.34	0.001	0.02
T-2	48	85	1.41	0.02	0.36	0.003	0.05
Totals:	3433	---	7.0	3.3	330	0.5	1.4
Projected	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	177	100	1.07	0.18	2.82	0.01	0.30
F-16	2885	85	3.14	2.57	275	0.43	0.94
F-22 (Proposed IOB at Eglin)	336	10	0.19	0.07	7.54	0.01	0.03
KC-135	23	19	0.01	0.02	0.34	0.001	0.02
T-2	48	85	1.41	0.02	0.36	0.003	0.05
Totals:	3469	---	5.8	2.9	290	0.5	1.3

EGLIN AFB

Tyndall LLA MOA

Baseline	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-15C (Eglin)	400	85	1.87	0.63	75.1	0.1	0.10
F-15C (Students - Tyndall)	334	85	1.57	0.53	62.7	0.08	0.09
F-16	63	85	0.07	0.06	6.01	0.009	0.02
F-22 (Students -Tyndall)	677	85	3.17	1.20	129	0.20	0.44
MU-2	357	85	0.08	0.01	0.98	0.004	0
Totals:	1831	---	6.8	2.4	270	0.4	0.6
Projected	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-15C (Students - Tyndall)	334	85	1.57	0.53	62.7	0.08	0.09
F-16	63	85	0.07	0.06	6.01	0.009	0.02
F-22 (Proposed IOB F-22s at Eglin)	448	50	1.23	0.47	50.3	0.08	0.17
F-22 (Students - Tyndall)	677	85	3.17	1.20	129	0.20	0.44
MU-2	357	85	0.08	0.01	0.98	0.004	0
Totals:	1879	---	6.1	2.3	250	0.4	0.7

EGLIN AFB**W-151**

Baseline	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
C-130	1228	80	10.2	1.96	55.4	0.20	3.95
F-15C (Eglin)	2600	10	1.43	0.48	57.4	0.07	0.08
F-15C (surrogate representative aircraft)	6807	10	3.75	1.26	150	0.19	0.20
F-15C (Students - Tyndall)	577	10	0.32	0.11	12.7	0.02	0.02
F-16	3124	10	0.4	0.33	35.0	0.06	0.12
F-22 (Students - Tyndall)	2137	10	1.18	0.45	47.9	0.08	0.16
Totals:	16473	---	17	4.6	360	0.6	4.5
Projected	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
C-130	1228	80	10.2	1.96	55.4	0.20	3.95
F-15C (Students - Tyndall)	577	10	0.32	0.11	12.7	0.02	0.02
F-15C (Surrogate representative aircraft)	6807	10	3.75	1.26	150	0.19	0.20
F-16	3124	10	0.4	0.33	35.0	0.06	0.12
F-22 (Students - Tyndall)	2136	10	1.18	0.45	47.9	0.08	0.16
F-22 (Proposed IOB)	2912	10	1.61	0.61	65.3	0.10	0.22
Totals:	16784	---	17	4.7	370	0.6	4.7

EGLIN AFB**W-155****Baseline**

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-15C (Eglin)	400	10	0.22	0.07	8.83	0.01	0.01
Totals:	400	---	0.2	0.07	8.8	0.01	0.01

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-22 (Proposed IOBl)	448	10	0.25	0.09	10.1	0.02	0.03
Totals:	448	---	0.2	0.09	10	0.02	0.03

EGLIN AFB**W-453 (E. Gulf)****Baseline**

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	117	50	0.27	0.05	0.70	0.004	0.08
B-1	117	55	0.42	0.19	6.46	0.02	0.24
B-52	116	55	2.64	1.89	9.34	0.04	0.93
C-130	117	40	0.16	0.03	0.88	0.003	0.06
C-141	117	40	0.38	0	2.65	0.01	0.28
F-18	585	10	0.45	0.04	7.8	0.01	0.22
F-14	585	10	0.61	0.03	4.80	0.01	0.09
F-15C (Students - Tyndall)	0	10	0	0	0	0	0
F-15C (Eglin)	600	10	0.33	0.11	13.3	0.02	0.02
F-16	585	10	0.07	0.06	6.56	0.01	0.02

Totals:

2939	---	5.3	2.4	52	0.1	1.9
------	-----	-----	-----	----	-----	-----

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	117	50	0.23	0.04	0.61	0.003	0.07
B-1	117	55	0.42	0.19	6.46	0.02	0.24
B-52	116	55	2.64	1.89	9.34	0.04	0.93
C-130	117	40	0.16	0.03	0.88	0.003	0.06
C-141	117	40	0.38	0	2.65	0.01	0.28
F-18	585	10	0.45	0.04	7.8	0.01	0.22
F-14	585	10	0.61	0.03	4.80	0.01	0.09
F-16	585	10	0.07	0.06	6.56	0.01	0.02
F-22 (Proposed IOB at Eglin)	671	10	0.37	0.14	15.1	0.02	0.05

Totals:

3010	---	5.3	2.4	54	0.1	2
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EGLIN AFB**W-470**

Baseline	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	1730	10	1.32	0.10	23.1	0.04	0.64
F/QF-106	418	10	0.24	0.02	2.00	0.008	0
F-15C (Eglin)	5200	10	2.87	0.96	115	0.15	0.16
F-15C (Surrogate representative aircraft)	4200	10	2.32	0.78	92.8	0.12	0.13
F-15C (Students - Tyndall)	2697	10	1.49	0.5	59.6	0.08	0.08
F-22 (Students - Tyndall)	3690	10	2.03	0.77	82.8	0.13	0.28
Totals:	17935	---	10	3.1	370	0.5	1.3
Projected	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	1730	10	1.32	0.10	23.1	0.04	0.64
F/QF-106	418	10	0.24	0.02	2.00	0.008	0
F-15C (Students - Tyndall)	2697	10	1.49	0.5	59.6	0.08	0.08
F-15C (Surrogate representative aircraft)	4200	10	2.32	0.78	92.8	0.12	0.13
F-22 (Students - Tyndall)	3690	10	2.03	0.77	82.8	0.13	0.28
F-22 (Proposed IOB at Eglin)	5824	10	3.21	1.22	131	0.21	0.45
Totals:	18559	---	11	3.4	390	0.6	1.6

ELMENDORF AFB

Galena MOA

Baseline		Annual Sortie	% Time below mixing height	Emissions (tons per year)				
				CO	VOCs	NOx	SO2	PM10
	F-15C	45	8	0.01	0.005	0.6	0.001	.0008
	Totals:	45	---	0.01	.005	0.6	.001	008
Projected		Annual Sortie	% Time below mixing height	Emissions (tons per year)				
				CO	VOCs	NOx	SO2	PM10
	F-22	57	2	0.005	0.002	0.19	.0006	.0007
	Totals:	57	---	.005	.002	0.2	006	007

ELMENDORF AFB**Naknek 1 MOA****Baseline**

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	97	0	0	0	0	0	0
F-15E	315	0	0	0	0	0	0
F-15C	541	0	0	0	0	0	0
Totals:	953	---	0	0	0	0	0

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	97	0	0	0	0	0	0
F-15E	315	0	0	0	0	0	0
F-22	684	0	0	0	0	0	0
Totals:	1096	---	0	0	0	0	0

ELMENDORF AFB**Naknek 2 MOA****Baseline**

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	97	0	0	0	0	0	0
F-15E	282	0	0	0	0	0	0
F-15C	180	0	0	0	0	0	0
Totals:	559	---	0	0	0	0	0

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	97	0	0	0	0	0	0
F-15E	282	0	0	0	0	0	0
F-22	228	0	0	0	0	0	0
Totals:	607	---	0	0	0	0	0

ELMENDORF AFB**Stony A MOA****Baseline**

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	383	8	0.18	0.01	3.06	0.01	0.09
F-15E	620	0	0	0	0	0	0
F-15C	2978	8	0.99	0.33	39.5	0.09	0.05
Totals:	3981	---	1.2	0.3	43	0.1	0.1

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	383	8	0.18	0.01	3.06	0.01	0.09
F-15E	620	0	0	0	0	0	0
F-22	3769	2	0.31	0.12	12.7	0.04	0.04
Totals:	4772	---	0.5	0.1	16	0.05	0.1

ELMENDORF AFB**Stony B MOA****Baseline**

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	192	0	0	0	0	0	0
F-15C	1354	0	0	0	0	0	0
Totals:	1546	---	0	0	0	0	0

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	192	0	0	0	0	0	0
F-22	1713	0	0	0	0	0	0
Totals:	1905	---	0	0	0	0	0

ELMENDORF AFB**Susitna MOA****Baseline**

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-15E	23	0	0	0	0	0	0
F-15C	541	0	0	0	0	0	0
F-16	35	0	0	0	0	0	0
Totals:	599	---	0	0	0	0	0

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-15E	23	0	0	0	0	0	0
F-16	35	0	0	0	0	0	0
F-22	684	0	0	0	0	0	0
Totals:	742	---	0	0	0	0	0

MOUNTAIN HOME AFB

Jarbidge MOA

Baseline

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	2401	95	13.2	2.25	34.6	0.2	3.73
B-1	349	55	1.58	0.71	24.4	0.1	0.89
F-15E	1896	35	1.61	1.32	141	0.25	0.48
F-15C	1149	17	0.73	0.24	29.1	0.04	0.04
Others (assumed F-16)	442	33	0.11	0.09	9.82	0.02	0.03
F-16	2036	31	0.77	0.63	67.3	0.12	0.23
Totals:	8273	---	18	5.2	310	0.7	5.4

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	2401	95	13.2	2.25	34.6	0.2	3.73
B-1	349	55	1.58	0.71	24.4	0.1	0.89
F-15E	1896	35	1.61	1.32	141	0.25	0.48
F-16	2036	31	0.77	0.63	67.3	0.12	0.23
Others (assume F-16)	442	33	0.11	0.09	9.82	0.02	0.03
F-22	3375	5	0.63	0.24	25.6	0.05	0.09
Totals:	10499	---	18	5.2	300	0.7	5.5

MOUNTAIN HOME AFB

Owyhee MOA

Baseline

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	1632	50	3.72	0.64	9.77	0.06	1.05
B-1	153	55	0.27	0.12	4.23	0.02	0.15
F-15E	1939	20	0.5	0.41	43.5	0.08	0.15
F-15C	1633	17	1.15	0.39	46	0.07	0.06
F-16	2247	19	0.41	0.34	35.9	0.06	0.12
Others (assumed F-16)	242	19	0.04	0.04	3.87	0.007	0.01
Totals:	7846	---	6.1	1.9	140	0.3	1.6

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
A-10	1632	50	3.72	0.64	9.77	0.06	1.05
B-1	153	55	0.27	0.12	4.23	0.02	0.15
F-15E	1939	20	0.5	0.41	43.5	0.08	0.15
F-16	2247	19	0.41	0.34	35.9	0.06	0.12
Others (assume F-16)	242	19	0.04	0.04	3.87	0.007	0.01
F-22	4796	5	0.99	0.38	40.4	0.07	0.14
Totals:	11009	---	5.9	1.9	140	0.3	1.6

TYNDALL AFB

Tyndall LLA MOA

Baseline	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-15C (Eglin)	400	85	1.87	0.63	75.1	0.1	0.10
F-15C (Students - Tyndall)	334	85	1.57	0.53	62.7	0.08	0.09
F-16	63	85	0.07	0.06	6.01	0.009	0.02
F-22 (Students - Tyndall)	677	85	3.17	1.20	129	0.20	0.44
MU-2	357	85	0.08	0.01	0.98	0.004	0
Totals:	1831	---	6.8	2.4	270	0.4	0.6
Projected	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-15C (Students - Tyndall)	334	85	1.57	0.53	62.7	0.08	0.09
F-15C (Eglin)	400	85	1.87	0.63	75.1	0.1	0.10
F-16	63	85	0.07	0.06	6.01	0.009	0.02
F-22 (Proposed IOB at Tyndall)	448	50	1.23	0.47	50.3	0.08	0.17
F-22 (Students - Tyndall)	677	85	3.17	1.20	129	0.20	0.44
MU-2	357	85	0.08	0.01	0.98	0.004	0
Totals:	2279	---	8	2.9	320	0.5	0.8

TYNDALL AFB

W-151

Baseline	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
C-130	1228	80	10.2	1.96	55.4	0.20	3.95
F-15C (Students - Tyndall)	577	10	0.32	0.11	12.7	0.02	0.02
F-15C (Eglin)	2600	10	1.43	0.48	57.4	0.07	0.08
F-15C (Surrogate representative aircraft)	6807	10	3.75	1.26	150	0.19	0.20
F-16	3124	10	0.5	0.41	43.8	0.07	0.15
F-22 (Students - Tyndall)	2136	10	1.18	0.45	47.9	0.08	0.16
Totals:	16472	---	17	4.7	370	0.6	4.6
Projected	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
C-130	1228	80	10.2	1.96	55.4	0.20	3.95
F-15C (Surrogate representative aircraft)	6807	10	3.75	1.26	150	0.19	0.20
F-15C (Eglin)	2600	10	1.43	0.48	57.4	0.07	0.08
F-15C (Students - Tyndall)	577	10	0.32	0.11	12.7	0.02	0.02
F-16	3124	10	0.4	0.33	35.0	0.06	0.12
F-22 (Proposed IOB at Tyndall)	2912	10	1.61	0.61	65.3	0.10	0.22
F-22 (Students - Tyndall)	2136	10	1.18	0.45	47.9	0.08	0.16
Totals:	19384	---	19	5.2	420	0.7	4.8

TYNDALL AFB

W-155

Baseline

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-15C (Eglin)	400	10	0.22	0.07	8.83	0.01	0.01
Totals:	400	---	0.2	0.07	8.8	0.01	0.01

Projected

	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-15C (Eglin)	400	10	0.22	0.07	8.83	0.01	0.01
F-22 (Proposed IOB)	448	10	0.25	0.09	10.1	0.02	0.03
Totals:	848	---	0.5	0.2	19	0.03	0.05

TYNDALL AFB

W-453 (E. Gulf)

Baseline		Annual Sortie	% Time below mixing height	Emissions (tons per year)				
				CO	VOCs	NOx	SO2	PM10
	A-10	117	50	0.27	0.05	0.70	0.004	0.08
	B-1	117	55	0.42	0.19	6.46	0.02	0.24
	B-52	116	55	2.64	1.89	9.34	0.04	0.93
	C-130	117	40	0.16	0.03	0.88	0.003	0.06
	C-141	117	40	0.38	0	2.65	0.01	0.28
	F-18	585	10	0.45	0.04	7.8	0.01	0.22
	F-14	585	10	0.61	0.03	4.80	0.01	0.09
	F-15C (Students - Tyndall)	0	10	0	0	0	0	0
	F-15C (Eglin)	600	10	0.33	0.11	13.3	0.02	0.02
	F-16	585	10	0.07	0.06	6.56	0.01	0.02
	Totals:	2939	---	5.3	2.4	52	0.1	1.9
Projected		Annual Sortie	% Time below mixing height	Emissions (tons per year)				
				CO	VOCs	NOx	SO2	PM10
	A-10	117	50	0.27	0.05	0.70	0.004	0.08
	B-1	117	55	0.42	0.19	6.46	0.02	0.24
	B-52	116	55	2.64	1.89	9.34	0.04	0.93
	C-130	117	40	0.16	0.03	0.88	0.003	0.06
	C-141	117	40	0.38	0	2.65	0.01	0.28
	F-18	585	10	0.45	0.04	7.8	0.01	0.22
	F-14	585	10	0.61	0.03	4.80	0.01	0.09
	F-15C (Eglin)	600	10	0.33	0.11	13.3	0.02	0.02
	F-16	585	10	0.07	0.06	6.56	0.01	0.02
	F-22 (Proposed IOB at Tyndall)	671	10	0.37	0.14	15.1	0.02	0.05
	Totals:	3610	---	5.7	2.5	68	0.2	2

TYNDALL AFB

W-470

Baseline	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	1730	10	1.32	0.10	23.1	0.04	0.64
F/QF-106	418	10	0.32	0.03	5.57	0.01	0.16
F-15C (Students - Tyndall)	2697	10	1.49	0.5	59.6	0.08	0.08
F-15C (surrogate representative aircraft)	4200	10	2.32	0.78	92.8	0.12	0.13
F-15C (Eglin)	5200	10	2.87	0.96	115	0.15	0.16
F-22 (Students - Tyndall)	3690	10	2.03	0.77	82.8	0.13	0.28
Totals:	17935	---	10	3.1	380	0.5	1.4
Projected	Annual Sortie	% Time below mixing height	Emissions (tons per year)				
			CO	VOCs	NOx	SO2	PM10
F-18	1730	10	1.32	0.10	23.1	0.04	0.64
F/QF-106	418	10	0.24	0.02	2.00	0.008	0
F-15C (Eglin)	5200	10	2.87	0.96	115	0.15	0.16
F-15C (Students - Tyndall)	2697	10	1.49	0.5	59.6	0.08	0.08
-15C (surrogate - representative aircraft)	4200	10	2.32	0.78	92.8	0.12	0.13
F-22 (Proposed IOB at Tyndall)	5817	10	3.21	1.22	131	0.20	0.45
F-22 (Students - Tyndall)	3690	10	2.03	0.77	82.8	0.13	0.28
Totals:	23752	---	13	4.4	510	0.7	1.7