

Air Quality Playbook

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Table of Contents

Air Quality Management Acronyms.....	4
Air Quality Program Management Definitions	8
Air Quality Program Management Strategic Goals.....	13
Air Quality Program Management Comprehensive References.....	15
1.0 Planning and Administration	19
1.1 Regulatory Status	19
1.1.1 – Compliance History	20
1.1.2 – Information Collection Request	20
1.1.3 – Attainment Status	22
1.2 – Establish Strategic Plan	23
Process 1.2 – Strategic Plan	23
Step 1.2.1 – Research Relevant Regulations, Guidance, and Strategies.....	24
Step 1.2.2 – Define Scope	24
Step 1.2.3 – Identify Challenges.....	24
Step 1.2.4 – Establish Goals and Objectives	24
Step 1.2.5 – Predict Possible Outcomes	24
Step 1.2.6 – Communicate Intended Goals to Sources Managers	25
Step 1.2.7 – Establish Metrics to Measure Outcomes	25
1.3 – Budgeting Process.....	26
1.3.1 – Payment of Fees and Permits	27
1.3.2 – Cost of compliance Assessment (CoC)	27
1.3.3 – Pollution Prevention (P2)	29
1.4 – Emissions Control Technology	30
1.4.1 – Alternative Fuels/Fuel Data.....	32
1.4.2 – Industrial Process Standards	33
1.5 – Creating/Utilizing Air Emissions Reduction Credits	34
1.6 – Planning for Military Unique Sources	36
1.7 – General Conformity and the National Environmental Policy Act	37
1.8 - Risk Management	39
1.9 – Emergency Episode Planning	44
1.10 - Permits	44

1.10.1 – Create New Permit.....	46
1.10.2 – Modify or Renew Existing Permit.....	49
1.10.3 – Determine Type of Permit Required Process.....	51
1.10.4 – Air Dispersion Modeling.....	54
1.10.5 – Open Burning/Prescribed Burning Permits.....	54
1.11 – IT Requirements.....	55
1.12 – Contract Management.....	56
1.13 – State Implementation Plan.....	57
1.14 – New Source Performance Standards (NSPS).....	58
2.0 Implementation and Operation.....	65
2.1 – Air Emissions Inventory for Stationary and Mobile Source Processes.....	65
2.2 – Managing Title V Permit.....	69
2.3 – Managing State Operating Permits.....	73
2.4 – Manage Mobile Sources.....	76
2.5 – Ozone Depleting Substances (ODS) Management Process.....	77
2.6 – Emissions Monitoring.....	78
3.0 Compliance and Checking Corrective Actions.....	80
3.1 – Operating Permits Continuous compliance for Title V Process.....	80
3.2 – Record Keeping System and Requirements.....	80
3.3 - Inspections.....	81
3.4 – Prepare for External Inspection.....	82
4.0 Management Review.....	84
4.1 – Evaluate Performance Measures.....	84
4.2 – Perform Air Quality Review.....	86
4.3 – Respond to Data Calls.....	88
4.4 – Prepare Action Items.....	92
5.0 Training.....	94

Air Quality Management Acronyms

A

ACES	Automated Cost Evaluation System
ACES-PM	Automated Civil Engineering System-Project Management
ACM	Asbestos Containing Material
ACO	Administrative Compliance Order
AFCEE	Air Force Center for Engineering and the Environment
AFI	Air Force Instruction
AFRPA	Air Force Real Property Agency
AEI	Air Emission Inventory
AER	Achievable Emission Rate
AETC	Air Education and Training Command
AMP	Asbestos Management Plan
APO	Administrative Penalty Order
AQ-COC	Air Quality Cost of Compliance
AQ-ECR	Air Quality Environmental Compliance Requirement
APIMS	Air Program Information Management System

B

BACT	Best Available Control Technology
BMP	Best Management Practices

C

CAA	Clean Air Act
CEM	Continuous Emissions Monitoring
CHIEF	Clearinghouse for Inventories and Emission Factors
COC	Cost of Compliance
COP	Community of Practice
COTS	Commercial-off-the-Shelf
CSR	Corporate Social Responsibility

D

DAU	Defense Acquisition University
DHS	Department of Homeland Security
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
DOJ	Department of Justice

E

EC	Environmental Compliance
EIAP	Environmental Impact Analysis Process

EIDCS	Environmental Information Data Call System
EMS	Environmental Management System
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPCRA	Emergency Planning and Community Right-to-Know Act
EPEAT	Environmentally Preferable
ERC	Emission Reduction Credits
ESOHC	Environmental, Safety, and Occupational Health Committee
ESOHCAMP	Environmental, Safety, and Occupational Health Compliance Assessment Management Program

F

FEMP	Federal Energy Management Plan
FESOP	Federally Enforceable State Operating Permits
FIP	Federal Implementation Plan
FY	Fiscal Year

G

GACT	Generally Available Control Technology
GCE	Government Cost Estimate
GCN	Ground Control Network
GHG	Greenhouse Gas
GSA	General Services Administration
GRADE	Asbestos Guidance for Rating Assessing Damage and Exposure
GWP	Global Warming Potential

H

HAP	Hazardous Air Pollutant
HAZMART	Hazardous Materials
HMMS	Hazardous Materials Management System
HUD	Department of Housing and Urban Development
HVAC	Heating, Ventilating, and Air Conditioning

I

ICR	Information Collection Request
IEE	Installations and Environment and Logistic
IGE	Independent Government Cost Estimate
I&M	Inspections and Maintenance

L

LAER	Lowest Achievable Emission Rate
LEPC	Local Emergency and Planning Committee

M

MACT	Maximum Achievable Control Technology
MAJCOM	Major Command
MIS	Management Information System
MIPR	Military Interdepartmental Purchase Request

N

NA NSR	Non Attainment New Source Review
NAAQs	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NONROAD	Nonroad Engines, Equipment, and Vehicles
NOV	Notices of Violation
NSPS	New Source Performance Standards
NSR	New Source Review

O

ODS	Ozone Depleting Substances
OMB	Office of Management and Budget
OSHA	Occupational Safety and Health Administration

P

P2	Pollution Prevention
POM	Program Objective Memorandum
POP	Period of Performance
PSD	Prevention of Significant Deterioration
PSM	Process Safety Management
PTE	Potential to Emit

Q

QA/QC	Quality Assurance/Quality Checks
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R

RACT	Reasonably Available Control Technology
REO	Regional Office
RMP	Risk Management Program

S

SAF	Secretary of the Air Force
SAF/IEE	Assistant Secretary of the Air Force for Installations, Environment,

	and Logistics
SAM	Sampling Analysis and Monitoring
SERC	State Emergency Response Commission
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SJA	Staff Judge Advocate
SOP	Standard Operating Procedure
SOW	Statement of Work
SSC	Services Steering Committee

T

TCM	Transportation Control Measures
TO	Technical Order
TRI	Toxic Release Inventory
TQ	Threshold Quality

Air Quality Program Management Definitions

Achievable Emission Rate (AER)	A rate used by the Environmental Protection Agency to determine if emissions from a new or modified major stationary source are acceptable under SIP guidelines.
Administrative Compliance Order (ACO)	A scheduled date issued by the EPA by which the Base Level Air Quality Program Manager must be in compliance.
AF Review	Review developed by the Base Level Air Program Manager identifying all new permits.
Air Emission Inventory	The AEI provides information on total emissions by pollutant, and on specific sources to be used for determining whether air pollution permits are required.
Air Program Information Management System	An air quality management system that allow Air Quality Program Manager to manage all data necessary to demonstrate compliance with federal, state and local air quality regulations.
Asbestos Management Plan	Requires Air Quality Program Managers to develop and maintain annual asbestos inventory.
Automated Civil Engineering System-Project Management (ACES-PM)	System used for capturing and managing project data for the CE community.
Baseline/Base Year	A benchmark against which an entity's emissions are compared over time. The purpose of having a base year is to have a standardized benchmark to illustrate the trends in a base's emissions over time and allows emissions associated with operational changes to be tracked.
Best Area Technology Available (BACT)	A program requirement, part of the New Source Review (NSR), for criteria pollutants from new and modified existing sources in attainment areas and economic feasibility is a consideration.
Continuous Emissions Monitoring (CEM)	A method to quantify emission rates and collect emissions data and for AEI and compliance with permit conditions. Permits stipulate the emission source and pollutant type that require CEM.
Cost of Compliance	Expenditure of time or money in conforming with government requirements.
Direct Emissions	Emissions resulting from the operation of sources that are owned or controlled by Air Force.
DoD Metrics	Metrics provided by DoD as a guideline for evaluating current Air Quality performance.
Emission Reduction Credit	An emission reduction credit (ERC) is a credit granted upon request by an emission source that voluntarily reduces emissions beyond required levels of control. An ERC represents the legal ability to emit regulated pollutants in an amount equal to the quantity specified when the ERC was granted.
Environmental Budget Programs	Available for Air Quality Management activities to the Environmental Compliance (EC) Program and the Pollution Prevention (P ₂) Program.

Environmental Management System	Used to help monitor and track impact on the environment in order reduce negative effects and also improve efficiency.
External Inspections	Inspection of a facility by the EPA or its authorized representatives.
Facility Energy Emissions	GHG emissions associated with the energy that powers Air Force installations and built infrastructure, including conventional (electricity or steam), renewable and other power sources.
Federal Implementation Plan (FIP)	Used in cases when a state is unable to provide an adequate plan to achieve attainment of air quality standards.
Federally Enforceable State Operating Permits (FESOP)	A type of permit issued by the state but is enforceable by the U.S. EPA and would allow sources to limit their air emissions to below the Title V threshold levels.
Fugitive and Process Emissions	Non-combustion, fugitive and process emissions from the operation of Air Force stationary and mobile HVAC and refrigeration equipment, fire suppression equipment, electrical switchgear, and weapon systems applications.
Fugitive Emissions	Emissions that cannot be captured and/or are unconfined such as emissions from landfills and construction activities, e.g., paving and grading. Air Program managers need to be aware that different Federal Air Programs may treat fugitive emissions differently.
General Conformity	Rule that requires coordinating with State and local governments in air quality nonattainment or maintenance areas to ensure that actions performed conform to the initiatives established in the applicable state implementation plan (SIP).
Greenhouse Gas	Gases that trap heat in the atmosphere are commonly referred to as greenhouse gases. Some greenhouse gases, such as carbon dioxide, occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (GHG) (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are carbon dioxide, methane, nitrous oxide and fluorinated gases.
Greenhouse Gas Inventory	The quantification of greenhouse gas emissions on a given AF base.
Halon	Chemical compounds that are are often used in fire extinguishers.
Halon Management Plan	The process of tracking the quantity of Halon on base and keeping an up-to-date inventory.
Hazardous Air Pollutants	List of pollutants deemed hazardous by the EPA.
Hazardous Materials Management System	System used by AFMC for managing the use of hazardous materials on base.
Indirect Emissions	Emissions that occur as a result of Air Force operations but are produced by sources owned or controlled by another entity.

Information Collection Request	Letter sent by the EPA or State requesting information to the Base Level Air Program Manager.
Lowest Achievable Emission Rate (LAER)	A program requirement, part of the New Source Review (NSR), of new sources in non attainment areas with NAAQs.
Maintenance Area	An area that was at one time in nonattainment but took measures to come into compliance and be redesignated an attainment area.
Major Source	Term used to determine the applicability of Prevention of Significant Deterioration and new source regulations. In a nonattainment area, any stationary pollutant source with potential to emit more than 100 tons per year is considered a major stationary source. In PSD areas the cutoff level may be either 100 or 250 tons, depending upon the source.
Management Information System (MIS)	Provides a standardized, integrated tool and methodology to track, manage, and report all data related to Air Force environmental programs.
Maximum Achievable Control Technology (MACT)	A program required for major sources of HAPs and is designed to reduce HAP emissions to a maximum achievable degree considering cost reductions and other factors.
Minor NSR	A permitting program for new facilities or modifications to existing facilities where emissions increases are not large enough to meet the emission thresholds for the major NSR permitting requirements.
Mobile Source Energy Emissions	GHG emissions originate from the operation of Air Force aircraft, ground transportation and related equipment.
Mobile Source Inventory	Tracking the quantity of emissions from mobile sources produced on the facility.
Motor Vehicle Inspection and Maintenance Program	State or local program that applies to bases in certain ozone and carbon monoxide nonattainment areas. The program requires the compliance of federal fleet and federal employee vehicles.
National Ambient Air Quality Standards	The EPA established standards for six criteria pollutants: carbon monoxide, lead, nitrogen oxide, particulate matter (PM10 and PM2.5), ozone, and sulfur dioxide.
National Emission Standard for Hazardous Air Pollutants	Standards for pollutants outlined by the EPA aimed at preventing damage to the environment and public health.
National Environmental Policy Act	Law requiring the consideration of environmental impacts in project planning.
New Source Performance Standards (NSPS)	Establish federal emission standards for source categories which cause or contribute significantly to air pollution as outlined in the CAA.
New Source Review	NSR is a preconstruction permitting program.
Non-Attainment New Source Review (NA NSR)	A permitting program that applies to major sources in non-attainment areas, where air quality violates the NAAQS. The purpose of this program is to bring air quality in these areas into compliance with national standards, without blocking economic development.

Notice of Violation	Sanctions levied by the State or EPA for non-compliance with Air Quality standards.
Ozone Depleting Substances	Substances the EPA defines as having a severe negative effect on the ozone.
Pollution Prevention Program	AF program to ensure compliance with pollution prevention guidelines.
Potential to Emit (PTE)	The maximum capacity of a stationary source to emit a pollutant under its physical and operational design and is used to determine major source thresholds.
Prevention of Significant Deterioration	Prevention of Significant Deterioration (PSD) applies to new major sources or major modifications at existing sources for pollutants where the area the source is located is in attainment or unclassifiable with the National Ambient Air Quality Standards (NAAQS).
Process Safety Management Standard	A program under OSHA that outlines the requirements for managing hazards associated with processes using highly hazardous chemicals.
Program Objective Memorandum	Budgeting system where the projects are aggregated in order for prioritization by the Air Force (AF), then the Department of Defense (DOD), and then sent to Congress for approval.
Reasonably Available Control Technology (RACT)	A control technology that is reasonably available and is both technologically and economically feasible. Usually applies to existing sources in NAA.
Refrigerant Management Plan	The Refrigerant Management Plan provides a proposed course of action which will enable the effective management of Class I and II ODS inventories and to eliminate the use of all ODSs if viable non-ODS replacements are feasible.
Sampling Analysis and Monitoring (SAM)	A method to quantify emission rates and collect emissions data. Permits will stipulate the emissions source and pollutant type that require SAM.
Standard Industrial Classification (SIC)	A Federal Government system that classifies industries by code.
State Implementation Plan	State plan for complying with the federal Clean Air Act, administered by the Environmental Protection Agency. The SIP consists of narrative, rules, technical documentation, and agreements that an individual state will use to clean up polluted areas.
Statement of Work	Formal document that captures and defines the work activities, deliverables and timeline a vendor will execute against in performance of specified work for a customer.
Strategic Sustainability Performance Plan	Each agency is required to develop and implement a plan to meet the specific requirements laid out in EO 13514 (beginning in FY11 and continuing through FY21). The Plan is to be integrated into the strategic planning and budget process.
Synthetic Minor	A synthetic minor source is an air pollution source that has the potential to emit (PTE) air pollutants in quantities at or above the major source threshold levels but has accepted federally enforceable limitations to keep the emissions below such levels.
Threshold Quality	The limited quantity of certain substances, outlined in the CAA, a facility can possess.

Title V	A type of permit required by the Clean Air Act (CAA). This type of permit must be obtained if the conditions of the facility match the criteria outlined in the CAA.
Toxic Release Inventory	A report compiled through media area interface and is not applicable to all bases.
Transportation Control Measures (TCM)	Bases located in non-attainment areas may be subject to transportation control measure requirements, such as Ride Sharing.
Variance	A variance is an administrative order granting temporary relief from the provisions of a regulation, including permit conditions. A variance allows a facility to operate while it takes steps to come into compliance with the regulation in question.
Waste Management	Non-combustion GHG emissions from waste management activities including disposal of Air Force-generated non-hazardous municipal solid waste in landfills, and the treatment of domestic wastewater generated on Air Force installations.

Air Quality Program Management Strategic Goals

The Air Quality Program Management Playbook supports Civil Engineering Goal 3 and Objectives 3.1 and 3.3.

CE Goal 3: Develop sustainable installations by implementing asset management principles for built and natural assets

Air Force Civil Engineering is actively responding to the Secretary of the Air Force's mandate to "...streamline infrastructure assets while optimizing operational capability" and maintain compliance with federal asset management, energy, and sustainability directives. We must meet these challenging goals in a way that simultaneously improves war fighter support and reduces infrastructure costs. We will accomplish this by implementing asset management principles for built and natural assets, reducing our physical plant, improving our infrastructure energy programs, and integrating sustainability into our planning and daily operations to more efficiently manage our physical plant throughout its lifecycle.

Objective 3.1: Institutionalize an asset management approach in our day-to-day business practices.

Asset management integrates existing Civil Engineer processes in a standardized sequence by providing visibility, advocacy, and allocation of resources. We will implement asset management to make better informed decisions for managing Civil Engineer assets and providing services across installation, MAJCOM, and Air Staff levels. We will strive to provide common levels of service across the Air Force and establish a predictive maintenance capability across the infrastructure and facility lifecycle. As part of our implementation, we will communicate and promote a proactive asset management approach across all of Civil Engineering and ensure our workforce is trained and equipped to implement and institutionalize the approach's principles, practices, and standardized processes. We will also work with our sister services and departmental partners at the strategic level as they assist us in institutionalizing this approach.

Sub-Objective 3.1:

3.1A- Develop and implement comprehensive asset management plans for the Civil Engineer through processes that identify strategic needs, business processes, metrics, information management, and decision support capabilities required to manage assets throughout their lifecycle

3.1B- Develop asset optimization tools that successfully facilitate effective asset management, including identification of mission dependence, facility condition, and real-time comprehensive space utilization (ECD: Dec 2010)

3.1C- Develop initial Activity Management Plan (AMP) levels of service, performance measures, and targets (ECD: Sep 2011)

3.1D- Assess nuclear-related facilities and infrastructure (ECD: Jan 2010)

Objective 3.3: Optimize natural infrastructure assets.

We will continue our legacy of environmental stewardship by implementing sustainability and asset management principles for our natural infrastructure. The principles of sustainability and asset management will focus on improving our environmental management capabilities, optimizing our environmental training efforts, and streamlining our environmental business processes. We will continue our restoration optimization efforts by reducing tooth-to-tail expenses to complete actions, accelerating site closures, and implementing an Air Force oversight program.

Sub-objective 3.2:

3.3A- Improve natural infrastructure sustainability through an asset management approach that allows the Air Force to systematically manage and optimize the associated

performance, risk, and expenditures over the lifecycle in meeting prescribed levels of service and support to organizational and mission goals (ECD: Sep 2011)

3.3B- Implement an Air Force-wide Environmental Management System (EMS) that will continually improve operational capability by identifying and managing environmental, safety, and occupational health (ESOH) constraints (risks/impacts/costs) and sustain natural infrastructure assets through optimized business processes and effective performance measures (ECD: Feb 2012)

3.3C- Continue ERA optimization with a focus on reducing cost to complete, accelerating site closure, and reducing tooth-to-tail expenses (ECD: Dec 2012)

3.3D- Optimize environmental management and reporting by fielding enterprise-wide Air Force capabilities for managing information, data, and reporting for environmental programs; ensure requirements are fully integrated and in line with the processes established.

Air Quality Program Management Comprehensive References

The following is a comprehensive list of references used within Air Quality Management.

This Playbook is aligned to the following AFIT courses: [WENV 101 Introduction to Environmental Management](#), [WENV 531 Air Quality Management](#), and [WENV 532 Advanced Air Quality Management](#).

Strategic Goal Alignment

- [Air Quality Management Strategic Goal Alignment](#)

Definitions and Acronyms

- [Air Quality Management Definitions](#)
- [Air Quality Management Acronyms](#)

Templates

- N/A

Policies and Regulations

- [29 CFR 1910.110](#)
- [32 CFR 989](#)
- [40 CFR 124](#)
- [40 CFR 51](#)
- [40 CFR 52](#)
- [40 CFR 60](#)
- [40 CFR 60 Subpart III](#)
- [40 CFR 62](#)
- [40 CFR 63, Subpart M](#)
- [40 CFR 64.1](#)
- [40 CFR 70](#)
- [40 CFR 70.4](#)
- [40 CFR 72.2](#)
- [40 CFR 81, Subpart C](#)
- [40 CFR Part 68, Appendix A](#)
- [40 CFR 89](#)
- [61 FR 28641](#)
- [927 AWRI 32-4002](#)
- [AFI 32-1052](#)
- [AFI 32-2001](#)
- [AFI 32-7001](#)
- [AFI 32-7040](#)
- [AFI 32-7080](#)
- [AFI 32-7086](#)
- [AFI 90-801](#)
- [Air Modeling](#)
- [Air Quality Policy on Wildland and Prescribed Burns](#)

- [CAA Title VI, Section 601-617](#)
- [Clean Air Act](#)
- [Clean Air Act \(Amendments of 1990\), Section 176](#)
- [Clean Air Act, 112\(r\)](#)
- [Clean Air Act, Section 108](#)
- [Clean Air Act, Section 110, Part D](#)
- [Clean Air Act, Section 118](#)
- [Clean Air Act, Title VI](#)
- [Clean Air Act, Title VII](#)
- [DoDI 4715.17](#)
- [Executive Order 12856](#)
- [Executive Order 13423](#)
- [Executive Order 13514](#)
- [Major Source Guidance](#)
- [NAAQs](#)
- [P2 AFI 32-7041](#)
- [Pollution Procurement Act \(PPA\) of December 1990](#)

Forms

- [AF Form 36](#)
- [AF Form 616](#)
- [AF Form 9](#)
- [DoD Form 1149](#)
- [Maintenance Log](#)
- [MIPRs](#)
- [Visual Opacity Log Form](#)

File Directories

- N/A

Websites

- [Aarcher Institute](#)
- [ABS Consulting](#)
- [Acquisition University Website](#)
- [Air and Waste Management Association](#) (Go to Environmental Education/Professional Development)
- [Air Pollution Training Institute](#)
- [Air Quality Managers CoP](#)
- [Air Quality Website](#)
- [Air Resource Management](#)
- [AP-42 EPA Emission Factors \(CHIEF Website\)](#)
- [DOE's Voluntary Reporting of Greenhouse Gases 1605\(b\) Program](#)
- [Energy Information Administration \(EIA\) Voluntary Reporting of Greenhouse Gases Program](#)
- [Environmental Issues with Construction Contracting Air Resource Management](#)
- [EPA Climate Leaders](#)
- [EPA Emission Measurements Center](#)
- [EPA Green Book for Nonattainment Areas](#)

- [EPA List of Class One of ODS Substances](#)
- [EPA RACT/BACT/LAER Clearinghouse](#)
- [EPA Transportation and Air Quality Website](#)
- [EPA Website](#)
- [ESOH Symposium 2010](#)
- [GHG Protocol](#)
- [Keesler AFB Asbestos Management](#)
- [Keesler AFB Asbestos Operating Model](#)
- [Mobile6 Vehicle Emission Modeling Software](#)
- [NONROAD Emission Estimating Model](#)
- [Online SIP Process Model](#)
- [Significant New Alternatives Policy \(SNAP\) Program](#)
- [The Climate Registry](#)
- [TRI Reporting Information](#)
- [Trinity Consulting](#)
- [World Resources Institute Greenhouse Gas Protocol](#)

Documents

- [Adopted Aircraft Engine Emission Standards](#)
- [AF CAA Conformity Guide](#)
- [AF ERC Database](#)
- [AF Guide to Air Quality Management](#)
- [AF Strategic Plan](#)
- [AF/AFMC GHG Mandatory Reporting Rule Monitoring Plan](#)
- [AFCEE AQ Handout Contracting Section](#)
- [AFCEE/TDNQ CAA Cost of Compliance Statement of Work](#)
- [AFIT Conformity Presentation](#)
- [AFIT Control Technology Lesson](#)
- [AFIT Course for Contract Management](#)
- [AFIT ODS Management Presentation](#)
- [AFMC SOP for Air Quality Stationary Source](#)
- [Air Force Training ENV 531 Module](#)
- [Air Quality Management using Pollution Prevention: A Joint Service Approach, March 1998](#)
- [Applicability Threshold Summary](#)
- [Army Conformity Guide](#)
- [CEM References](#)
- [Defense Acquisition University](#)
- [DoD Hazardous Air Pollutants Status Binder](#)
- [Emergency Episode Plans for its Main Base and Utah Test and Training Range](#)
- [Enforcement and Compliance History Online](#)
- [EPA Continuous Emissions Monitoring Guidance](#)
- [EPA Method 22](#)
- [EPA Periodic Monitoring](#)
- [EPA Toxic Release Inventory Tables](#)
- [Example of Permit Requirements](#)
- [Fuel Economy Guide, 2010](#)
- [Greenhouse Gas Mandatory Reporting Rule Fact Sheet](#)
- [Guidance for the EPA Halon Emission Reduction Rule](#)
- [Installation Air Permit](#)
- [List of Affected Installations](#)
- [Ozone Depleting Substances Plan 2009 \(Hurlburt Field\)](#)

- [Ozone Depleting Substances/Refrigerant Management Plan](#)
- [Page 1 – NSR Applicability Determination](#)
- [Page 2 – PSD Applicability for New Source](#)
- [Page 3 – PSD Applicability for Source Modification](#)
- [Page 4 – BACT PSD Analysis](#)
- [Page 6 – Additional Impact Analysis for PSD](#)
- [Page 7 – Class I Area Impact](#)
- [Page 8 – Nonattainment Area Review](#)
- [Page 9 – New Source PSD Review Determination](#)
- [Page 10 – Major Modification PSD Determination](#)
- [Page 11 – Best Available Control Technology](#)
- [Page 12 – Air Quality Analysis](#)
- [Page 13 – Additional Impact Analysis](#)
- [Page 14 – Class I Area Impact Analysis](#)
- [Page 15 – Nonattainment Area Applicability](#)
- [Page 16 – Nonattainment Area Requirements](#)
- [SIP Guidance Document](#)
- [SIP Presentation](#)
- [Stationary and Mobile Source Emissions Guide](#)
- [Tables \(Attainment Status\)](#)
- [US EPA Technology Transfer Handbook: Control Technologies for Hazardous Air Pollutants Reference \(EPA/625/6-86/014\)](#)
- [USAF Guidebook for Environmental Compliance POM Models](#)
- [Vehicle Engine Penalty Policy](#)

Systems (if applicable)

- ACES OM
- Air Force approved hazardous materials management information system
- APIMS
- DENIX
- EMIS
- ESOHMIS
- Hazardous Materials Management System (HMMS)
- MS Access
- MS Excel
- MS Project
- Primavera P3

1.0 Planning and Administration

1.1 Regulatory Status

A. Narrative

The responsibilities of a Base Air Program Manager include, but are not limited to, the following:

- Understanding site air quality regulatory conditions
- Maintaining site compliance with air regulatory requirements including:
 - operating equipment within air quality permit or exemption conditions
 - minimizing releases of Ozone Depleting Substances
 - submission of any regulatory required reports
 - maintenance of required regulatory documentation
- Implementing site corrective/improvement actions to comply with permit requirements
- Paying regulatory fees

Below are best practices to be compliant with regulatory tracking:

- Participate with regulators for regulatory development
- Participate with Air Force/DoD working groups
- Subscribe to websites and join list-serves to obtain regulations
- Monitor State websites for local regulations
- Work with the base legal team and the Air Quality District team
- Look for REOs, announcements, and to ensure regulations are most up to date and if any regulations have changed
- Obtain information from the MAJCOM
- Read the DoD Hazardous Air Pollutants Status Binder- The binder's purpose is to assist Base Air Program Managers in achieving timely compliance with HAP regulations by enabling early identification of funding requirements
- Determine which regulations apply to the current situation (NESHAPS)
- Alert bases when impacts occur
- Be aware of source permits (present and future) and determine rules that apply so that regulations can be translated appropriately to go into the budget

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. N/A

3. Forms

- a. N/A

4. Documents

- a. DoD Hazardous Air Pollutants Status Binder

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. N/A

C. Advice and Tips

- N/A

1.1.1 – Compliance History

A. Narrative

Determine if the State or EPA has any open Air Quality notices of violation (NOVs) against the base. Currently States need to be aware of any ongoing or unresolved consent orders, compliance agreements, NOVs, interagency agreements, or equivalent state enforcement actions. A finding will have the enforcement action/identifying the citation. Determine if there are any open ESOHCAMP findings against Air Quality Sources or processes from internal and external audits. Determine if noncompliance issues have been resolved by review in a previous report.

Maintaining compliance involves tracking rates of emissions regularly. To assist in maintaining compliance, base personnel should compare the updated emissions inventory with the terms set in the original permit.

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. Clean Air Act

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. Enforcement and Compliance History Online (ECHO)

7. Systems

- a. N/A

C. Advice and Tips

- N/A

1.1.2 – Information Collection Request

A. Narrative

The Information Collection Request (ICR) is a method used for rule development to collect information on an industry. The EPA or State may send an ICR or Section 114 letter requesting information to the Base Air Program Manager. The Base Air Program Manager is then required to fill out specified sections and submit the form back by a specified date or potentially be subject to a penalty of \$37,500 per day. The Base Air Program Manager then notifies the MAJCOM, REO, and Air Quality SME of receipt of the ICR. The notice goes to the Air Force point of contact (AF POC) leading the team for rule making effort. The legal team at the base must be involved. It is important to determine if multiple bases have been given a similar request. If multiple bases have been given a similar request, then the Base Air Program Manager must collaborate with other bases to provide information and coordinate responses with the Department of Defense (DOD) and Clean Air Act (CAA) Steering Group. If other bases have not received the same ICR, then the Base Program Manager will complete the ICR without coordination with other bases. All of the expenses incurred for the ICR should be recorded by the Base Air Program Manager.

Information is requested semiannually by the Air Force Environmental Information Data Call System (AF EIDCS).

EIDCS:

- Provides reasonable further progress tracking
- Facilitates state implementation plan (SIP) inventory reporting
- Facilitates annual EPA required reporting
- Facilitates annual EPA required reporting
- Facilitates managing a Title V permit program
- Provides data for compliance actions activities

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. Clean Air Act

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. N/A

C. Advice and Tips

- There are other informal requests by the EPA, state and local agencies. The Base Air Program Manger should decide whether to respond to or not which provide a baseline information about a particular activity on bases.

1.1.3 – Attainment Status

A. Narrative

For the following emission examples, limits need to be obtained to determine how limits affect emission budget, to determine how limits affect how expensive permits are, and to determine how limits affect projects that go into the budget. Ozone and PM₁₀/PM_{2.5} are the two emissions that will be of importance and relevance to Base Air Program Managers:

- Ozone (NO_x, VOC)
- SO₂
- CO
- Lead
- PM₁₀/PM_{2.5}

The Environmental Protection Agency (EPA) establishes standards for each of the emissions listed above. Some states may have adopted more stringent degrees of severity for attainment status standards. For Air Quality Program Management, it is important to know individual state severity levels because emissions may be in a nonattainment status. State severity levels are determined through regional monitoring and the EPA.

The US EPA has developed and promoted the National Ambient Air Quality Standards (NAAQs) for criteria pollutants [CO, O₃, SO₂, NO₂, PM₁₀/PM_{2.5} and Lead (Pb)]. There are both primary standards, developed in order to protect public health, and secondary standards, developed in order to protect the environment and welfare. The EPA evaluates each air quality region for compliance. Each area is designated as an area of either attainment or nonattainment with respect to the standards. Installations located in an area of nonattainment have air quality that do not meet one or more NAAQs

For attainment areas, there are guidelines for the prevention of significant deterioration (PSD) where issues to prevent deterioration of air quality in areas that were already in attainment with NAAQs to ensure they do not fall into nonattainment.

New sources and modifications to existing sources must undergo a review process prior to operation. This review is known as new source review (NSR). NSR requirements are part of the nonattainment and PSD programs. Approval of a project depends on the attainment status of the area in which the proposal modification or construction takes place. For areas in attainment with the NAAQs, the project will require a permit if the pollutant of concern from the project is above the applicable threshold listed in the PSD regulations. A project that emits a pollutant in an area that is nonattainment from that pollutant, is required to obtain a NSR permit if the emission exceeds the applicable thresholds for that respective pollutant.

For the sources near pristine areas (Class I), such as national parks, additional rules apply to ensure visibility is not reduced. The PSD and nonattainment requirements generated the concept of emissions trading. Some states allow voluntary emission reduction credits (ERCs) to be banked for later use or transferred to a third party. Proposed new or modified sources in nonattainment status must affect new emissions in amounts that would meet or exceed emissions. In addition to offsetting emissions, stringent control technologies must be applied to the new or modified source.

For the new sources or modifications, lowest achievable emission rate (LAER) is required for nonattainment areas. In attainment areas, the PDS permit must meet Best Available Control Technology (BACT) requirements. LAER requires the most stringent level of control achieved in any standard operating procedure (SOP) must be used.

Conformity offsets may include emission reductions from employee vehicles or aircraft. Conformity is only required for nonattainment and maintenance areas. A maintenance area is an area that was at one time in nonattainment but took measures to come into compliance and be redesignated an attainment area. The Clean Air Act Amendments requires a ten year demonstration of maintenance of the NAAQs before redesignation as an attainment area.

The Air Force is responsible for determining if its actions conform with the applicable state implementation plan (SIP) for the purpose of eliminating or reducing violations of the NAAQs. As part of the planning process, a conformity analysis must be completed to examine impacts of direct or indirect air emissions from Air Force actions.

[Proceed to Regulatory Status.](#)

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. 40 CFR 81 Subpart C
- b. NAAQs
- c. AF CAA Conformity Guide

3. Forms

- a. N/A

4. Documents

- a. Table

5. File Directories

- a. N/A

6. Websites

- a. EPA Green Book for Nonattainment Areas

7. Systems

- a. N/A

C. Advice and Tips

- N/A

1.2 – Establish Strategic Plan

A. Narrative

Process 1.2 – Strategic Plan

Estimated Completion Time: N/A

The Base Air Program Manager is responsible for establishing a strategic plan for their base that outlines goals, using relevant regulations and guidance, to reduce the emission of air pollutants. The Base Air Program Manager creates specific projects that will lead to the accomplishment of these goals on the base.

Step 1.2.1 – Research Relevant Regulations, Guidance, and Strategies

Role: Base Air Program Manager

Estimated Completion Time: N/A

Research relevant regulation, guidance, and strategies: Research relevant regulations, guidance, and strategies, such as executive orders, AFI's, state and local regulations.

[Proceed to Step 1.2.2.](#)

Step 1.2.2 – Define Scope

Role: Base Air Program Manager

Estimated Completion Time: N/A

Define time period and areas of focus of and quantify goal(s), such as, reduce greenhouse gas emission x% from y sources by 2010. At the Air National Guard however, the Air Program Manager at the Readiness Center establishes goals in VEMO and the bases align their goals and activities.

[Proceed to Step 1.2.3.](#)

Step 1.2.3 – Identify Challenges

Role: Base Air Program Manager

Estimated Completion Time: N/A

Using the AF Strategic plan, guidance from MAJCOM, AFCEE, and chain of command identify challenges that might derail the achievement of goals laid out in the strategic plan

[Proceed to Step 1.2.4.](#)

Step 1.2.4 – Establish Goals and Objectives

Role: Base Air Program Manager

Estimated Completion Time: N/A

Using the direction from HQ, DoD, and executive orders, establish the goals for base with an appropriate timeframe for accomplishment. Executive orders generally provide specific timelines. Additionally, establish objectives to meet these goals by planning specific projects.

[Proceed to Step 1.2.5.](#)

Step 1.2.5 – Predict Possible Outcomes

Role: Base Air Program Manager

Estimated Completion Time: N/A

Predict the desired and possible undesired outcomes from the goals and objectives, such as what happens when the facility achieves an overall reduction in greenhouse gas emissions by 15%.

[Proceed to Step 1.2.6.](#)

Step 1.2.6 – Communicate Intended Goals to Sources Managers

Role: Base Air Program Manager *Estimated Completion Time: N/A*

Meet with source managers to communicate goals and intended plans, relaying to them how this will impact their day to day activities.

[Proceed to Step 1.2.7.](#)

Step 1.2.7 – Establish Metrics to Measure Outcomes

Role: Base Air Program Manager

Estimated Completion Time: N/A

Establish metrics to measure future outcomes according to the timeframe established when defining strategic goals.

[Proceed to Process 3.2 Record Keeping System and Requirements Data Quality.](#)

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. Executive Order 13514
- b. Clean Air Act

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. N/A

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Research Relevant Regulations, Guidance, and Strategies• Define Scope• Identify Challenges

	<ul style="list-style-type: none"> • Establish Goals and Objectives • Predict Possible Outcomes • Communicate Intended Goals to Source Managers • Establish Metrics to Measure Outcomes • Proceed to Record Keeping and Reporting Process
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D. Advice and Tips

- N/A

1.3 – Budgeting Process

A. Narrative

Environmental Budget Programs are available for Air Quality Management activities to the Environmental Compliance (EC) Program and the Pollution Prevention (P2) Program.

In the EC Program all requirements are divided into recurring projects associated with on-going projects (e.g. permitting fees, maintenance, and sustainment). Non-recurring projects are classified as Level I services required to comply or to correct findings of non-compliance. Level II services are required to prevent future non-compliance. As Level III such services/activities are beyond legal requirements. EC requirements are primarily funded through Operations and Maintenance (OPM) 3400 and Military Construction (MILCON) 3300 appropriations using associate programming/budgeting/ appropriation rules.

B. References and Resources

1. **Templates**
 - a. N/A
2. **Policies and Regulations**
 - a. Clean Air Act
 - b. AFI 32-7040
3. **Forms**
 - a. N/A
4. **Documents**
 - a. AF Strategic Plan
 - b. AFMC SOP for Air Quality Stationary Source
5. **File Directories**
 - a. N/A
6. **Websites**
 - a. N/A
7. **Systems**
 - a. N/A

C. Advice and Tips

- N/A

1.3.1 – Payment of Fees and Permits

A. Narrative

Permit fees are fees related to permits, are state dependent and may be calculated based on the following:

- Fee per air emission inventory (i.e. dollar amount per ton)
- Criteria Pollutants/NAAQS
- How many tons are being used and develop a per ton fee for Title V Permits
- NESHAPS, Conformity, Clean Air Act Section 118 (Link to Budget Playbook)
- Program budget to comply local, federal, and state requirements with DoD fiscal year Program Operations Memorandum (POM) schedule (project several years out)

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. N/A

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. N/A

C. Advice and Tips

- N/A

1.3.2 – Cost of compliance Assessment (CoC)

A. Narrative

This process evaluates the emission source activities against the regulatory compliance requirements (Federal, state, and local) to identify recurring and non-recurring projects for inclusion in the environmental compliance program.

These planning requirements should address the two pieces of compliance, implementing, and maintaining and sustaining. When planning for the Air Quality budget, it is important for the Clean Air Act Cost of Compliance (CAA COC) to forecast as many years as possible (e.g. 10 year planning horizon).

A standardized generic Statement of Work (SOW) is available through AFCEE/TDNQ for use by the bases and by MAJCOMs.

The purpose of the CAA COC is to identify potential Air Quality projects and to complete OMB-A106 project documentation to be submitted into the AF ACES budgeting system

To produce the AQ-COC Report, assessment is to include:

- Overall facility emissions
- Summary of pertinent regulations
- Summary of pertinent regulations
- Develop Cost of Compliance with Regulations
- Complete AQ-ECRs

CAA COC baseline complexity should be accomplished on a 3-5 year cycle. A standard Air Quality Cost of Compliance (AQ-COC) Statement of Work available through AFCEE/TDNQ.

Note: The CAA-COC assessments shall consider the approved list of AF Air Quality standard projects and titles and enhance where needed. Additional cost justifications shall be provided in the cost estimate if the estimated amount exceeds the AF-EQ POM funding matrix.

Assumptions regarding the status of regulatory compliance shall be documented in the assessment. These AQ-COC reports or assessments should provide total estimated "costs" for compliance with the CAA regulations and applicable state and local regulations. The AQ-COC should provide anticipated schedule of projects along with providing guidance on funding mechanisms (e.g. O&S/ Level I, II, and III; O&M 3400; or MILCON 3300 appropriations). Each recommended Air Quality Environmental Compliance requirement (AQ-ECR) shall be supported with project description, justification, and cost estimate.

AQ-COC Methodology:

1. Gather and obtain emissions source information on the installations air emissions inventory, permits, registrations, attainment with the National Air Ambient Quality Standard (NAAQS) and applicability to National Emission Standard for Hazardous Air Pollutants (NESHAPs)
2. Perform a regulatory review of applicable Federal, state, and local rules and regulations against the inventory and permitting backdrop

At a minimum, bases need to consider recurring and non-recurring projects for the POM that address their installation's Air Quality category needs for:

- Air Emission Inventories
- NAAQS Compliance [CO, O₃, SO₂, NO₂, PM₁₀/PM_{2.5} and Lead (Pb)]
- Assessments, implementations, monitoring, and sampling analysis
- NESHAPs (assessments, Implementations, Record Keeping, and Sampling Analysis Monitoring)
- Risk Management Plans (Assessments, Plans, Record Keeping, Plan Revisions/updates, alternative compliance)
- Permits and Fees (Permit Assessments, preparation, renewals, medications, recordkeeping, P&F Air, P&F Title V)
- Conformity (SAM, Air Conformity Analysis, Conformity Determination)
- Training (Training, Air Program Awareness)
- Sampling Analysis and Monitoring (SAM) (e.g. CAA Cost of Compliance, Assessments, Emissions Assessments, Regulatory Stakeholder Involvement)

- State Implementation Plan (SIP) and other

B. References and Resources

1. Templates

- a. CAA_CoC-Template.rtf

2. Policies and Regulations

- a. AFI 32-7040
- b. AFI 32-7001

3. Forms

- a. N/A

4. Documents

- a. AFCEE/TDNQ CAA Cost of Compliance Statement of Work
- b. USAF Guidebook for Environmental Compliance POM Models, HQ USAF/CEV, 11 Jan 1996

5. File Directories

- a. N/A

6. Websites

- a. Air Quality Managers CoP

7. Systems

- a. ACES-PM

C. Advice and Tips

- N/A

1.3.3 – Pollution Prevention (P2)

A. Narrative

In accordance with E.O. 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, it is Air Force policy to prevent and reduce pollution by minimizing or eliminating the use of hazardous materials, and by minimizing the release of pollutants into the air and other environmental media (i.e., soil and water) as much as is technically and economically feasible. Air pollution prevention planning should be integrated with air emission mitigation strategies, and should include an assessment of the viability of obtaining emission offsets or emission reduction credits (ERCs) for quantifiable, permanent, and surplus criteria pollutant emission reductions.

Pollution Prevention (P2) includes all the work necessary to eliminate or reduce undesirable impacts on the human health or the environment. Such, P2 requirements relating to Air Quality includes recurring and non-recurring requirements. P2 is a cost effective and sound approach to environmental protection and is key to obtaining environmentally sustainable economic development.

Congress sets out national policy on:

- P2 prevention/reduction where feasible

- Pollution that can't be prevented shall be recycled
- Pollution that can't be prevented or recycled shall be treated in an environmentally safe manner

The primary focus of Air Quality Mangers is to comply with Air. Programming Air Force Environmental Compliance projects is an emerging "service." Air Quality Mangers must accurately predict costs for new technologies and get projects approved and funded in the Program Objective Memorandum (POM) Cycle. In addition to getting known requirements with the POM, Air Quality Mangers must estimate projects costs, associated with potential legislation. Air Quality Managers should also to into account air emissions credits.

B. References and Resources

1. Templates

- N/A

2. Policies and Regulations

- P2 AFI 32-7041
- Executive Order 13423
- AFI 32-7040
- AFI 32-7080
- AFI 32-2001
- Executive Order 12856
- Pollution Procurement Act of (PPA) of December 1990

3. Forms

- N/A

4. Documents

- Air Quality Management using Pollution Prevention: A Joint Service Approach, March
- USAF Guidebook for Environmental Compliance POM Models, HQ USAF/CEV, 11 Jan 1996

5. File Directories

- N/A

6. Websites

- N/A

7. Systems

- DENIX

C. Advice and Tips

- N/A

1.4 – Emissions Control Technology

A. Narrative

Control technologies are applied to sources of air pollution and either prevents the production of air pollutants in the exhaust stream or to minimize the concentration of air pollutants once they are produced. A control technology can be an add-on piece of equipment or a simple process change, such as material

or fuel substitution. An installation may need to retrofit emission sources to incorporate control technologies. Use of control technologies often has significant costs and tight deadlines.

Control technologies rarely depend upon emission pollutants:

- Best Available Control Technology (BACT) – is required for criteria pollutants from new and modified existing sources in attainment areas and economic feasibility is a consideration.
- Lowest Achievable Emission Rate (LAER) – is required of new sources in non attainment areas with NAAQs and cost is not a consideration.
- Reasonably Available Control Technology (RACT) – is required of many existing sources in non attainment areas
- Maximum Achievable Control Technology (MACT) – is required for major sources of HAPs
- Generally Available Control Technology (GACT) - is required for area sources of HAPs.

Base Air Program Managers must perform engineering and economic analysis and projects to ensure appropriate selection of control technologies and effectiveness.

The basic theories of control technologies include absorption, separation, process modification, conversion, and behavioral changes. The use of the Air Force Guide to Air Quality Management final report all under contract no. F49650 – 91 – D0008). HQ USAF/CEV, April 1995 describes the selection process of an AF Installation might use in their control consideration. The USAF guidebook for Environmental Compliance POM model addresses Air Quality (clause 12 section 3.3.3 standards) page 3-10; CAA project programming in pages 5-10 and Air Quality Cost Models in section 6.5 (pages 6-114 – through 6-134)

- Decreasing Operations (pages 6 -114 to 6 – 116)
- Industrial Vent Location (pages 6 – 117 to 6-118)
- Plating Operation (pages 6-119 to 6-120)
- Continuous Emission Monitoring Systems (pages 6 – 121 to 6 – 122)
- Boilers, Incinerators, and Combustion Sources (pages 6-123 to 6 -129 and 6-130)
- Paint Stripping Operations (page 6-131)
- Fueling Operations (page 6-131 to 6 -132)
- Auxiliary Equipment (page 6-132 – 6-134)

A further reference for use by Base Air Program Managers in the selection and programming of emissions control devices may be found in the DOE- Argonne National Laboratory EID Division Report: “Air Pollution Control Systems Selection, Sizing, and Cost Estimates for Compliance Issue Sources at Air Force installation,” June 4, 1990. This document addresses the selection, sizing, and costs for the following pollutant emission streams:

1. Process point sources
2. Process fugitive emissions
3. Process area fugitives

These source categories address criteria pollutants and hazardous air pollutants (HAPs), both hydrocarbon and Inorganic Pollutant Emissions.

This report on control technologies may be used for pollutant control selection and Air Pollution Control Equipment Cost Estimation guidance of cost estimation, and approaches to total capital costs and annualized operating costs.

B. References and Resources

- 1. Templates**
 - a. N/A
- 2. Policies and Regulations**
 - a. Clean Air Act
- 3. Forms**
 - a. N/A
- 4. Documents**
 - a. AF Guide to Air Quality Management
 - b. USAF Guidebook for Environmental Compliance POM Models
 - c. AFIT Control Technology Lesson
 - d. US EPA Technology Transfer Handbook: Control Technologies for Hazardous Air Pollutants Reference (EPA/625/6-86/014) □□
- 5. File Directories**
 - a. N/A
- 6. Websites**
 - a. EPA RACT/BACT/LAER Clearinghouse
- 7. Systems**
 - a. N/A

C. Advice and Tips

- N/A

1.4.1 – Alternative Fuels/Fuel Data

A. Narrative

Alternative fuel conversions, which are vehicles that are modified to run on a different fuel than the one for which they were designed. Most conversions involve switching gasoline or diesel vehicles to operate instead on a gaseous fuel such as natural gas or propane, an alcohol fuel, or electricity. Any change to a vehicle's original certified configuration, including conversion, is a potential violation of the "Clean Air Act prohibition against tampering" (33 p, 1.4M, January 2009). To avoid a tampering charge, converters must follow EPA protocol.

3.4.3. E.O. 13423, Strengthening Federal Environmental, Energy, and Transportation Management, establishes federal agency goals for reducing greenhouse gas emissions and the consumption of petroleum-based fuels in fleet vehicles. Relative to fiscal year 2005 baselines, agencies are required to:

- Reduce the consumption of petroleum-based fuels by 2% annually through 2015
- Increase the consumption of non-petroleum-based fuels by 10% annually
- Acquire and use plug-in hybrid (PIH) technology vehicles when they are commercially available at a life-cycle cost that is reasonably comparable to non-PIH vehicles.

Installations are directed to begin establishing sustainable environmental, energy and transportation practices that will assist the Air Force in meeting the federal goals of E.O. 13423 through the

implementation or expansion of initiatives such as carpooling, use of public transportation, trip reduction techniques, and wider use of alternative fuels in fleet vehicles.

B. References and Resources

- 1. Templates**
 - a. N/A
- 2. Policies and Regulations**
 - a. AFI 32-7040
- 3. Forms**
 - a. N/A
- 4. Documents**
 - a. Clean Air Act
 - b. Fuel Economy Guide, 2010
 - c. Vehicle Engine Penalty Policy
- 5. File Directories**
 - a. N/A
- 6. Websites**
 - a. N/A
- 7. Systems**
 - a. N/A

C. Advice and Tips

- N/A

1.4.2 – Industrial Process Standards

A. Narrative

Industry based standards for NESHAPs are called maximum achievable control technology (MACT) standards. MACT is designed to reduce HAP emissions to a maximum achievable degree considering cost reductions and other factors.

MACT standards are based on emission levels already achieved from best-performing similar facilities and this baseline is referred to as the MACT floor. At a minimum, a MACT standard must achieve throughout the industry a level of emissions control that is at least equivalent to the MACT floor, and the MACT floor differs for existing sources and new sources. EPA can establish a more stringent standard when it makes economic, environmental and public health sense.

Sources subject to MACT are either major sources or area sources of HAPs. Area sources may also use a control technology called Generally Available Control Technology (GACT).

B. References and Resources

- 1. Templates**
 - a. N/A
- 2. Policies and Regulations**

- a. Clean Air Act
- 3. **Forms**
 - a. N/A
- 4. **Documents**
 - a. N/A
- 5. **File Directories**
 - a. N/A
- 6. **Websites**
 - a. N/A
- 7. **Systems**
 - a. N/A

C. Advice and Tips

- N/A

1.5 - Creating/Utilizing Air Emissions Reduction Credits

A. Narrative

Prior to validating emission reduction, the base air manager should inquire of the regulatory agency (state, air district, etc.) to see if they have a credit banking program. If not, determine if credits can be banked for the future, and if banked credits can be adjusted against future production increases.

The credit banking program is particularly important to the Base Air Program because it allows for new projects or work to be added. For instance, if there is a reduction of emissions on a respective base, the Air Program Manager can use, trade or bank the surplus credits to offset new projects or work that are occurring or will occur on the base. In situations where a credit banking program does not exist, the Air Program Manager should work with the local and state agencies to establish banking or trading program.

Air Emission Reduction Credits. The Clean Air Act (CAA) allows the Environmental Protection Agency (EPA) and the states to develop economic incentive programs to control and reduce air emissions. Such programs allow sources to “generate”, “buy”, “sell”, “bank”, or “trade” emissions reduction credits (ERCs). ERCs are authorized and created by appropriate state or local authorities, and will vary from location to location pursuant to applicable EPA rules. ERC programs need to be approved by EPA in a State Implementation Plan (SIP) to become effective. Credits earned by any source that permanently reduces emissions beyond its reduction requirements can be traded to another source that could use such credits, in lieu of on-site reductions, to meet its reduction obligations. ERCs may also be banked for future use as offsets for nonattainment area New Source Review (NSR) or General Conformity determinations. ERCs are treated as federal personal property and disposed of according to the appropriate federal property disposal regulations. Flying operations shall not be reduced for the sole purpose of obtaining ERCs; however, installations should ensure that emissions from aircraft flying operations are accounted for in comprehensive emissions inventories and memorialized in any applicable SIP emissions budget for the installation.

Emission Reduction Credit Identification. ERCs can be created as a result of operational changes or installation closure. They can be obtained by removing pollutant-emitting equipment from service or reducing emissions from equipment, if the applicable air quality district allows. Planning for ERC utilization should include a determination of the applicable requirements for generation as soon as possible to avoid inadvertent loss of ERCs due to missed requirements. For example, some local rules require submission of an application for ERCs along with supporting documentation prior to any shutdown of the emissions source while other local rules require submission of the application within 90 days of permanent shutdown. In addition, some states may have laws that expressly apply to various aspects of ERC generation and disposition involving military base closures and realignments,

Emission Reduction Credit Inventory and Classification. Within one year, or as early as possible, prior to the departure of the active mission from a currently announced installation closure or realignment (immediately at installations where the active mission has departed or equipment emitting air emissions are discontinued, or within six months of an installation closure announcement for future closures), the environmental function will complete an inventory of all existing/potential sources of ERCs and associated emissions, and have a legal review prepared summarizing the applicable air quality district regulations on ERCs. Copies of the applicable ERC regulation will be included when facility ERCs are identified and any limitations on the disposition of the ERCs will be noted in the legal review. Such limitations may include prohibitions on the use of ERCs at closing facilities and if there are any restrictions on the leasing of ERCs. Forward the inventory, legal review, and appropriate regulations governing the use of these ERCs through the MAJCOM environmental function to the appropriate AFCEE REO. The ERCs will be initially classified as “related personal property ERCs”, “operational needs requirement ERCs”, or “personal property ERCs” on the inventory. The REO will circulate the inventory to other MAJCOMs and installations in the same air quality district who will identify ERCs they might need. The REO will then validate the list and forward it with comments back to the appropriate MAJCOM. MAJCOMs will review/validate the ERCs/categories, coordinate with HQ USAF/A7C, and submit to SAF/IEE for final approval.

Emission Reduction Credit Application. The Clean Air Act (CAA) allows sources in nonattainment areas with EPA-approved ERC programs to “trade” ERCs. Installations must follow regulatory agency procedures to apply for and obtain ERCs if interested in obtaining ERCs and if they have adequate funds for the associated fees. Installation realignment and closure funds may be used to conduct the emission reduction credit inventory and to pay for application fees for installations slated for closure. MAJCOMs must submit their requirements to the Air Force Real Property Agency (AFRPA) in accordance with AFRPA programming procedures. MAJCOMs receiving ERCs from closure installations will reimburse the installation realignment and closure account for its proportionate share of the costs of the inventory and application fees. Reimbursement is not required if the receiving installation is an installation realignment and closure site.

Emission Reduction Credit Use. ERCs can only be used in the same air quality control district/region in which they are generated, except where state or local laws and regulations provide otherwise.

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. AFI 32-7040
- b. Clean Air Act

3. Forms

- a. N/A

4. Documents

- a. AF ERC Database

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. N/A

C. Advice and Tips

- N/A

1.6 – Planning for Military Unique Sources

A. Narrative

Planning for military unique sources requires an understanding of the nature of emissions from those sources and how those sources are to be operated as part of or in support of the Air Force mission. This understanding allows an air program manager to more accurately identify impacts to local and regional air quality and evaluate if mitigation is required. The Air Force has several types of unique emission sources not typically encountered in the civilian environment whose emissions must be characterized and quantified in a manner similar to nonmilitary emission sources.

Military unique emissions sources include the following examples:

- Fuel cell maintenance for aircraft - Emissions of volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) are released to the atmosphere due to repairs, maintenance, and routine inspections conducted by Air Force personnel on aircraft fuel cells. The procedures for performing maintenance on the equipment, and subsequent VOC and HAP emissions rates, vary by aircraft type and the specific procedure conducted.
- Use of military-specific surface coatings, solvents, cleaners and other miscellaneous chemicals (e.g., Chemical agent resistant coating (CARC) paint, radar adsorbing material) during maintenance on military equipment, vehicles, and aircraft.
- Fire fighter training activities including the training of Air Force fire fighters using live fire scenarios, often in a fire training pit, mock structure, vehicle or aircraft.
- Open burning and open detonation of energetic materials to dispose of military munitions items such as small arms ammunition and high explosive incendiary cartridges, and assembled energetic materials, bomb fuses, and flares/signals.
- Mobile sources including military weapon systems (e.g., aircraft, missiles, rockets) and tactical vehicles.

Air Force personnel must account for emissions of these unique sources when determining compliance with Federal, state and local air quality regulations as well as during analyses conducted under the National Environmental Policy Act (NEPA) of 1969 (implemented by the Council on Environmental Quality (CEQ) regulations, and Presidential Executive Order (EO) 12114) and the general conformity rule (40 CFR 93 Subpart B). Both NEPA and the general conformity rule are designed to ensure Federal actions do not cause or contribute to the violation of air quality standards and require the Air Force to consider the environmental impacts of its proposed actions and reasonable alternatives to those actions. In addition, understanding and accounting for the operation of military unique sources in planning processes also enables installations to successfully obtain and maintain the appropriate air permits that are required for air quality planning, controlling and monitoring emissions, and ensuring compliance with Federal, state and local air quality regulations.

Quantifying emissions from military unique sources can be challenging, however, there are several tools and processes readily available to assist air quality managers. These tools offer approved methods for quantifying and documenting emissions for unique military sources as well as guidance to assist in responding and complying with Federal, state, and local air quality regulatory requirements. These tools also ensure uniform and logical approaches are applied when estimating emissions from military unique sources across the Air Force.

Comprehensive guidance documents such as the Air Force Air Emissions Inventory for Stationary and Mobile sources provides specific calculation methodologies and emissions factors for sources found at Air

Force installations. There are also approved processes in place that are documented in fact sheets, flow charts and other resources to assist in navigating the numerous and complex provisions of the Clean Air Act (CAA) and other legislative requirements applicable to Air Force installations and our military unique sources. These processes and tools often provide step by step procedures for requirements such as conducting a general conformity applicability and determination analysis, developing criteria pollutant and greenhouse gas inventories, preparing NEPA documents for construction/modification of new sources, and the Title V Operating Permitting process. In addition to this information, the Air Force and Department of Defense have established internal policies and instructions that provide information on how Air Force air quality managers should handle operation of various unique military sources in day to day activities (e.g., AFI 32-7040).

Air Force air quality managers also have access to modeling tools and software applications that will help quantify emissions from military unique sources. Such examples include:

- Air Conformity Applicability Model (ACAM) – ACAM is a computer model used by Air Force planners to determine general conformity applicability for proposed federal actions in non-attainment or maintenance designated area and for the Environmental Impact Analysis Process (NEPA).
- Air Program Information Management System (APIMS) – APIMS was developed for the Air Force to store and track data for air emission source categories, individual emission sources, emission source equipment and control devices, and provides algorithms needed to calculate emissions for inventorying, and responding to specific air quality permit requirements for military unique sources.
- Emissions and Dispersion Modeling System (EDMS) – EDMS is a tool developed by the Federal Aviation Administration and Air Force that helps assess the air quality impacts and produces estimates of pollutant emissions for mobile sources such as aircraft engines, auxiliary power units, aerospace ground equipment, and ground vehicles at airbase and airport operations, including those that are unique to the Air Force.

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. Clean Air Act

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. APIMS

C. Advice and Tips

- N/A

1.7 – General Conformity and the National Environmental Policy Act

A. Narrative

The Clean Air Act (CAA) and the National Environmental Policy Act (NEPA) both require consideration of environmental impacts in project planning. CAA-90 section 176 requires the actions under taken by Federal Agencies conform to applicable state implementation plan (SIP) or federal implementation plan (FIP). Conformity only applies to actions that take place in nonattainment or maintenance areas. The Air Force may proceed if the action is consistent with the air qualities region's plan to meet NAAQs. If the action does not conform with the applicable SIP, the project may proceed if the emissions are offset somewhere else on the installation so that the net emissions would be less than the thresholds required for a conformity study.

Where required, stand alone conformity document shall be proposed by the air quality managers to document that CAA "conformity" has been addressed in project planning. The approved CAA conformity document shall be attached to the NEPA documentation. NEPA documentation and conformity documentation must be separate documents.

Base Air Program Manager must work closely with the ESOHC to determine whether the actions undertaken by the Air Force conform to applicable SIP or FIP. The process of demonstrating "conformity" is dependent upon the air quality status of the region for where the action it proposed to take place as well as the type and amount of expected pollutants to be emitted. For those actions located in a nonattainment area or maintenance area, the requirements are detailed in the General Conformity Rule. The ability to demonstrate conformity is very dependent on emission baseline surveys for the installation and for the local air quality district. These surveys provide a baseline for comparing the impacts of the proposed action to current situation. This baseline is then compared to the direct and indirect emissions expected from the proposed action. Direct emissions are those that occur as a direct result of the actions and occur at the same time and place of the action, such as construction and demolition associated with the proposed action. Indirect emissions are those that occur at a later time or distance from the place where the action takes place, but may be reasonably anticipated as a consequence of the proposed action such as commuter activity to or from site of the action. If the total of these emissions is below certain *de minimis* levels, the action is exempted from the remaining requirements of the rule. Because air quality is managed on a regional basis and local regions may impose additional conformity requirements, the requirements analysis must be coordinated extensively with the local air quality regulatory authority. The CAA public notification and participation requirements also will add the planning timeline for the proposed action. The issue of impacting the NAAQS must be addressed in the air quality section of the EIAP prepared documents including the preparation of categorical exclusions. All Air Force actions requiring formal conformity determination prepared according to the "General Conformity Rule" must be approved by SAF/IEE prior to the related EIAP documentation being approved.

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. Clean Air Act (Amendments of 1990), Section 176
- b. AFI 32-7040
- c. 32 CFR 989
- d. 40 CFR 93, Subpart B

3. Forms

- a. N/A

4. Documents

- a. AF CAA Conformity Guide
- b. Army Conformity Guide
- c. AFIT Conformity Presentation

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

a. N/A

C. Advice and Tips

- The conformity documentation must be prepared by the project proponent. Coordination with the NEPA action office, legal counsel, and MAJCOM air program manager is required at minimum.

1.8 - Risk Management

A. Narrative

Process 1.8 – Risk Management

Estimated Completion Time: N/A

Based on section 112(r) of the Clean Air Act, Base Level Air Quality Managers are required to develop a Risk Management Program, prepare a Risk Management Plan (RMP), and submit the RMP to EP if the installation produces, handles, processed, distributes, or stores certain chemicals. There are three levels of level of regulation for the Risk Management Program. The first level applies to installations that operate at relatively low risk of causing the public harm. The second and third levels in the program apply to installations that have a greater capability of causing the public harm and thus, are more highly regulated. Accordingly, these installations are required to have a more robust and extensive RMP in order to prevent any large scale episodes that may put large numbers of the public at risk.

The following steps are to assist in creating a CAA Risk Management Plan IAW CAA section 112 and 40 CFR Part 68.

TABLE

Risk Management Program Elements

Program Level 1	Program Level 2	Program Level 3
Management System		
	Develop management system	Develop management system
Hazard Assessment		
Worst-case release scenario analysis	Worst-case release scenario analysis	Worst-case release scenario analysis
	Alternative release scenario analysis	Alternative release scenario analysis
	Definition of population/receptors	Definition of population/receptors
5-year accident history	5-year accident history	5-year accident history
Prevention Programs		
Certify no additional steps needed	Safety information	Process safety information
	Hazard review	Process hazard analysis
	Operating procedures	Operating procedures
	Training	Training
	Maintenance	Mechanical integrity
	Compliance audits	Management of change
	Incident investigation	Pre-startup review
		Compliance audit
		Incident investigation
		Employee participation
		Hot work permits
		Contractors
		(Program 3 Prevention Program elements conform to the OSHA PSM Standard)
Emergency Response Program		
Coordinate with local responders	Develop emergency response plan	Develop emergency response plan
Risk Management Plan (RMP)		
Executive summary	Executive summary	Executive summary
Registration of processes/chemicals	Registration of processes/chemicals	Registration of processes/chemicals
Hazard assessment data	Hazard assessment data	Hazard assessment data
5-year accident history	5-year accident history	5-year accident history
Certification	Prevention program information	Prevention program information
	Emergency response information	Emergency response information
	Certification	Certification

Decision 1.8.1 – Does the Facility Use 112(r) Regulated Substances?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine if your party uses a regulated substance for a single process. A list of pollutants, regulated substances, is located in the Clean Air Act (CAA) section 112(b) (1). If your facility has more than the threshold quantity (TQ) of a 112(r) listed "regulated substance" in a single process, then you must develop and implement a risk management program as specified by the rule. In terms of the regulation, "process" means manufacturing, storing, distributing, handling, or using a regulated substance in any way. All flammable substances used as fuel at any facility are exempt from these requirements.

For a list of the substances found in section 112 see: CAA 112(r) found in Title I Part A Section 112

[If 'Yes', proceed to Decision 1.8.3.](#)

[If 'No', proceed to Decision 1.8.2.](#)

Decision 1.8.2 – Does the Facility Use Extremely Hazardous Substances?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine if the facility uses extremely hazardous materials. If yes, the Base Air Program Manager must refer to CAA 112(r) to follow appropriate protocol.

If 'Yes', refer to CAA 112(r) in References Section

If 'No', End.

Decision 1.8.3 – Does the 112(r) Substance Exceed Thresholds?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine if the substance has a threshold and if it is over the threshold limit. The list for regulated threshold substances is located in 40 CFR Part 68, Appendix A. CAA section 112(r). Additionally, exemptions should be checked as well.

The list consists of toxic and flammable chemical substances that if accidentally released could cause death, injury, or severe adverse effects to human health and the environment. The threshold quantities range from 500 to 20,000 pounds for each process.

[If 'Yes', proceed to Decision 1.8.4.](#)

If 'No', refer to CAA 112(r) in References Section.

Decision 1.8.4 – Would a Release or Accident Impact the Public?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine if a spill or release of any substance that is regulated would impact the public. Off-site consequence analysis consisting of the Worst Case Release Scenario and the Alternative Release Scenario must be performed. The worst-case release scenario requires that the facility assume a release of the largest vessel (either storage tank or receiver vessel in a time period of 10 minutes for toxic gasses). For explosive gasses, the area affected by the explosion is one which includes an over pressure of 1 psi. See *EPA References Toxic Release Inventory Tables* to standardize the process for organizations that have the same materials. Unlike the worst-case release scenario, the alternative release scenario includes the most likely release situation.

See *EPA Toxic Release Inventory Tables* in References Section

[If 'Yes', proceed to Decision 1.8.7.](#)
[If 'No', proceed to Decision 1.8.5.](#)

Decision 1.8.5 – Has an Accidental Release Occurred within the Past 5 Years with Off-site Consequences?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Check facility history to determine if any accidental release involving a regulated substance has occurred. A five-year accident history must be developed. This activity involves any event that resulted in death, injury, significant property damage, evacuations, etc.

[If 'Yes', proceed to Step 1.8.6.](#)
[If 'No', proceed to Decision 1.8.7.](#)

Step 1.8.6 – Develop a 5 year accident history record

Role: Base Air Program Manager

Estimated Completion Time: N/A

A five-year accident history must be developed. This activity involves any event that resulted in death, injury, significant property damage, evacuations, etc.

[Proceed to Decision 1.8.7.](#)

Decision 1.8.7 – Are There Coordinated Emergency Release Procedures with Local Responders?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Coordinate with any local emergency responders in case of any accidental releases. The Emergency Response Program requires stationary sources to prepare for possible catastrophic releases and thereby reduce risk to the public by having informed and prepared responders. The Emergency Response Program must include an emergency response plan, procedures for the use, inspection, and maintenance of emergency response equipment, training and procedures to review and update the emergency response plan. (NOTE: The Air Force Emergency Response Program is defined by AFI 32-4002, "Hazardous Material Emergency Planning and Response Compliance." The National Response Team has published guidance for integrated contingency plans in 61 FR 28641 plus correction pages at 61 FR 31103.)

[If 'Yes', proceed to Program Level 1.](#)
[If 'No', proceed to Decision 1.8.8.](#)

Decision 1.8.8 – Does the Process Have Program 3 Level Codes?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Use SIC codes provided to determine if a potential release falls under Program Level 3. The applicability of Program 3 of the 40 CFR Part 68 rule is driven, in part, by Standard Industrial Classification (SIC) codes. Stationary sources subject to the rule are required to report SIC codes in the risk management plan.

[If 'Yes', proceed to Program Level 3.](#)
[If 'No', proceed to Decision 1.8.9.](#)

Decision 1.8.9 – PSM Standard Determines Program

Role: Base Air Program Manager

Estimated Completion Time: N/A

If step 7 is “No” then OSHA Process Safety Management (PSM) Standard will determine if the facility falls under either Program 2 or Program 3. Guidance is located in 29 CFR 1910.119.

[If 'Yes', proceed to Program Level 3.](#)
[If 'No', proceed to Program Level 2.](#)

B. References and Resources

8. Templates

- a. N/A

9. Policies and Regulations

- a. 40 CFR Part 68, Appendix A
- b. Clean Air Act, 112(r)
- c. 927 AWRI 32-4002
- d. 29 CFR 1910.119

10. Forms

- a. N/A

11. Documents

- a. EPA Toxic Release Inventory Tables

12. File Directories

- a. N/A

13. Websites

- a. N/A

14. Systems

- a. N/A

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Does the Facility Use 112(r) Regulated Substances?• Does the Facility Use Extremely Hazardous Materials?• Does the 112(r) Substance Exceed Thresholds?• Would a Release or Accident Impact the Public?• Has an Accidental Release Occurred within the Past 5 Years with Off-site Consequences?• Are There Coordinated Emergency Release

	Procedures with Local Responders? <ul style="list-style-type: none"> • Does the Process Have Program 3 Level Codes? • PSM Standard Determines Program
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D. Advice and Tips

- N/A

1.9 – Emergency Episode Planning

A. Narrative

State and local regulations or agencies require installations to create an Emergency Episode Plan. The Base Air Program Manager should develop and implement a contingency plan for air pollution emergency episodes. Identify all actions that can reasonably be taken without compromising essential services and mission responsibilities. Refer to the applicable state implementation plan (SIP) for specific planning guidelines.

The state or local agency communicates the status of an emergency episode detailing the degree of severity, such as a code yellow or orange plan. Whenever notified by the respective agency, the base should carry out the outlined plan. For instance, one part of an installations plan may require carpooling for individuals traveling to the base.

B. References and Resources

1. **Templates**
 - a. N/A
2. **Policies and Regulations**
 - a. Clean Air Act
3. **Forms**
 - a. N/A
4. **Documents**
 - a. Emergency Episode Plans for its Main Base and Utah Test and Training Range
5. **File Directories**
 - a. N/A
6. **Websites**
 - a. N/A
7. **Systems**
 - a. N/A

C. Advice and Tips

- N/A

1.10 - Permits

A. Narrative

AF activities or assets that generate gaseous emissions must be accounted for in the air emissions inventory (AEI) and may need to obtain permits. The AEI provides information on total emissions by pollutant, and on specific sources to be used for determining whether air pollution permits are required. While AEI is an integral part of the permitting process, it does not always affect the level of emissions and plays a large role in the funding of the permitting process. The Clean Air Act (CAA) is the primary

statute that defines the air pollution permitting process. The individual states were delegated authority to administer the CAA permitting and enforcement processes. Additionally, State and/or local statutes may impose more stringent permitting requirements based on local conditions or priorities.

Permits may be required for specific types of activity, specific equipment, or specific pollutant types. Generally, construction permits are required before installation of new sources and operating permits are required before regulated activities begin. Title V and Federally Enforceable State Operating Permits (FESOP) operating permits are issued to cover an entire installation. Small installations may not be required to obtain an installation permit, but may instead permit individual sources.

Operational changes on the installation may require permit modifications or new permits. Examples include construction of new air pollution sources, mission changes (increased or decreased activity), rule changes, removal or replacement of equipment, administrative (name or commander) changes, and process or material changes.

The permit process is subject to change depending on which state the base is located. Each state and local agency has different permitting processes each with a set of specific steps. Therefore, a Base Air Program Manager should become familiar with the permitting process of the relevant state and local agencies.

New Source Review (NSR) Permitting Programs:

Under this CAA program, certain new stationary sources of air pollution or modifications to existing stationary sources are required to obtain an air permit before beginning construction. The permit specifies what air pollution control devices must be used, what emission limits must be met, and how the facility must be operated. The NSR program provides for public participation in the permitting process. The public generally has at least 30 days to comment on all draft NSR permits. There are three types of NSR permitting requirements. A source may have to obtain one or more of the following:

- 1. Prevention of Significant Deterioration (PSD)** – New or modified major stationary sources in attainment areas, or areas that meet the National Ambient Air Quality Standards (NAAQS), are required by the CAA to obtain PSD permit before constructing. "Unclassifiable Areas", or areas where the air quality data are insufficient to designate attainment or non-attainment, are also included in the PSD Permitting Program. The purpose of this program is to ensure that air quality is not significantly degraded from the addition of new or modified major sources of air pollution in these areas. Facilities must use best available control technology (BACT) to minimize their emissions.
- 2. Non-Attainment New Source Review (NA NSR)** - The NA NSR program applies to major sources in non-attainment areas, where air quality violates the NAAQS. The purpose of this program is to bring air quality in these areas into compliance with national standards, without blocking economic development. To do this, the NA NSR program has lower thresholds triggering NSR permitting requirements and requires facilities to use the lowest achievable emission rates (LAER), the EPA's strictest pollution control requirement. It also requires facilities to offset their emissions by arranging for a nearby source to reduce its existing emissions (known as "emissions trading" or "emissions offsets"). Note that a facility may be required to obtain both types of major NSR permits if it is located in an area that is in attainment for some of the pollutants it will emit but not for others.
- 3. Minor NSR** - For new facilities or modifications to existing facilities where emissions increases are not large enough to meet the emission thresholds for the major NSR permitting requirements described above, the states have EPA-approved minor NSR programs and those programs vary considerably from State to State.

Operating Permits Programs- The Operating Permits Program can be found in Title V of the CAA. Title V operating permits are legally enforceable documents issued to stationary sources after the source has begun to operate. Sources whose emissions are greater than the established title V permitting thresholds or who meet other applicable criteria are required to obtain an operating permit. The permits contain all

the air pollution control requirements that apply to the source, including requirements from NSR permits, or other applicable requirements, such as New Source Performance Standards (NSPS), or National Emissions Standards for Hazardous Air Pollutants (NESHAP).

The Title V Operating Permits Program provides for public participation in the permitting process. The public generally has at least 30 days to comment on all draft Title V operating permits. For all permits issued by a state or local permitting authority, EPA also has a 45-day review period, which may or may not run concurrently with the public comment period.

New permit requirements should be identified in the NEPA process. As a rule, each state has an internet web site describing the permitting process and providing suitable application forms. It may be useful to contact the state air program to facilitate the permitting process.

Existing permits will have a fixed term, and a specific expiration date. Renewal action should be initiated well in advance of the permit expiration date.

Permits will describe the specific conditions under which the installation may operate, and will generally include routine monitoring and reporting requirements which must be complied with.

Permit fees should be included in the budgeting process.

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. Clean Air Act
- b. 40 CFR 51
- c. 40 CFR 70
- d. 40 CFR 124

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. N/A

C. Advice and Tips

- N/A

1.10.1 - Create New Permit

A. Narrative

Process 1.10.1 – Create New Permit

Estimated Completion Time: N/A

The Base Air Program Manager is responsible for the creation of all new or revised permit applications. The Base Air Program Manager shall identify the need for new permits during the AF Budget review. The Base level Air

Program Manager should attend all project meetings until permit application is submitted to the permitting agency.

The permit process changes based on which state the base is located. Each state and local agency has different permitting processes each with a set of specific steps. Therefore, a Base Air Program Manager should become familiar with the permitting process of the relevant state and local agencies. Further, when necessary, the Base Air Program Manager should coordinate a review of the permit with MAJCOM and JA.

The create new permit process provides a course of action for ensuring that correct type of permit is applied for, the application is successfully submitted, and the approved permit is coordinated with the other existing permits on the base.

[Entry from Determine Type of Permits Process](#)

[Entry from Record Keeping System and Requirements](#)

Step 1.10.1.1 – Prepare Permit Application

Role: Base Air Program Manager

Estimated Completion Time: N/A

Prepare permit application by filling out the required fields, gathering all specification and data sheets necessary for calculating the Potential To Emit (PTE) for the equipment to be permitted. Review federal and state regulations for applicability to the permitting process.

[Proceed to Step 1.10.1.2.](#)

Step 1.10.1.2– Submit to Agency for Approval and Pay Application Fees as Required

Role: Base Air Program Manager

Estimated Completion Time: N/A

Submit permit application with a coversheet, to the necessary agency for approval and pay application fees as required. The agency where the application is submitted will depend on the location of the facility and nature of the permit. Application fees vary for each agency. When in doubt of the application fee, call the permitting agency you are submitting the permit to as they are there to help and will tell you the correct fee to submit.

[Proceed to Step 1.10.1.3.](#)

Step 1.10.1.3 – Submit Proposed Permit for Public Review as Required

Role: Permitting Agency

Estimated Completion Time: N/A

Submit proposed permit for public review as required by the permit application process.

[Proceed to Step 1.10.1.4.](#)

Step 1.10.1.4 – Address Public Comments as Required

Role: Permitting Agency

Estimated Completion Time: N/A

Respond to public comments and modify the proposed permit and/or permit requirements as required.

[Proceed to Step 1.10.1.5.](#)

Step 1.10.1.5 – Approve and Issue Final Permit

Role: Base Air Program Manager

Estimated Completion Time: N/A

Approve the permit and issue it to the applying base. Make a copy of the issued permit for the requesting organization for their records.

[Proceed to Managing Title V Permit.](#)

Decision 1.10.1.6 – Do the Changes Need to be Incorporated to Synthetic Minor or Title V?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine whether the changes from approved permit need to be incorporated into the synthetic minor or Title V permit.

[If “Yes”, proceed to Modify or Renew Existing Permit.](#)

[If “No”, proceed to Managing Title V Permit.](#)

B. References and Resources

1. **Templates**
 - a. N/A
2. **Policies and Regulations**
 - a. Major Source Guidance
 - b. Air Modeling
 - c. AF CAA Conformity Guide
 - d. AFI 32-7040
 - e. 40 CFR 60
 - f. 40 CFR 70
 - g. 40 CFR 89
3. **Forms**
 - a. N/A
4. **Documents**
 - a. N/A
5. **File Directories**
 - a. N/A
6. **Websites**
 - a. N/A
7. **Systems**
 - a. APIMS

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program	<ul style="list-style-type: none">• Determine Type of Permit Required Process• Record Keeping and Reporting Process

Manager	<ul style="list-style-type: none"> • Prepare Permit Application • Submit to Agency for Approval and Pay Application Fees as Required • Determine if the Changes Need to be Incorporated to Synthetic Minor or Title V • Manage the Permit Process • Modify or Renew Existing Permit Process
Permitting Agency	<ul style="list-style-type: none"> • Address Public Comments as Required • Approve and Issue Final Permit • Submit Proposed Permit for Public Review as Required

D. Advice and Tips

- N/A

1.10.2 – Modify or Renew Existing Permit

A. Narrative

Process 1.10.2 – Modify or Renew Existing Permit Process

Estimated Completion Time: N/A

Decision 1.10.2.1 – Does the Existing Permit Need to be Modified or Renewed?

Role: Base Air Program Manager

Estimated Completion Time: N/A

The Base Air Program Manager determines whether the existing permit needs to be modified or renewed. If yes, then he/she prepares the permit application for review. If no, then the Base Air Program Manager proceeds with the Manage Title V permit process.

If “Yes”, proceed to Decision 1.10.2.2.

If “No”, proceed to Process 2.2 Managing Title V Permits.

Step 1.10.2.2 – Prepare Permit Application for Review

Role: Base Air Program Manager

Estimated Completion Time: N/A

The Base Air Program Manager prepares the permit application for review.

If “Yes”, proceed to Decision 1.10.2.3.

If “No”, End.

Step 1.10.2.3 – Submit to Agency for Approval and Pay Application Fees as Required

Role: Base Air Program Manager

Estimated Completion Time: N/A

The Base Air Program Manager submits the permit application to the permitting agency for approval and pays application fees as required.

If “Yes”, proceed to Step 1.10.2.4.

If “No”, End.

Step 1.10.2.4 – Submit Proposed Permit for Public Review as Required

Role: Base Air Program Manager

Estimated Completion Time: N/A

The Base Air Program Manager submits the proposed permit for public review as required.

[Proceed to Decision 1.10.2.5.](#)

Step 1.10.2.5 – Address Public Comments as Required

Role: Permitting Agency

Estimated Completion Time: N/A

Once the proposed permit is submitted for public review, the permitting agency addresses the public comments.

[Proceed to Step 1.10.2.6.](#)

Step 1.10.2.6 – Approve and Issue Final Permit

Role: Permitting Agency

Estimated Completion Time: N/A

After review of public comments, the permitting agency approves and issues the final permit.

[Proceed to Process 2.2 Managing Title V Permits.](#)

B. References and Resources

1. **Templates**
 - a. N/A
2. **Policies and Regulations**
 - a. N/A
3. **Forms**
 - a. N/A
4. **Documents**
 - a. N/A
5. **File Directories**
 - a. N/A
6. **Websites**
 - a. N/A
7. **Systems**
 - a. N/A

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Determines whether the existing permit needs to be modified or renewed• Prepares permit application for review• Submits permit to agency for approval and pays

	<ul style="list-style-type: none"> application fees as required Submits proposed permit for public review as required
Permitting Agency	<ul style="list-style-type: none"> Addresses public comments as required Approves and issues final permit

D. Advice and Tips

- N/A

1.10.3 – Determine Type of Permit Required Process

D. Narrative

Process 1.10.3 – Determine Type of Permit Required Process

Estimated Completion Time: N/A

This process is an integral part of the Base Air Program Manager’s role for purposes of identifying, applying and managing permits.

Step 1.10.3.1 – Identify Source Type and Size

Role: Base Air Program Manager

Estimated Completion Time: N/A

The Base Air Program Manager identifies source as stationary or mobile and determines size of source type (minor, synthetic minor, or major).

[Proceed to Step 1.10.3.2.](#)

Step 1.10.3.2 – Determine Regulation that Potentially Applies

Role: Base Air Program Manager

Estimated Completion Time: N/A

The Base Air Program Manager reviews Federal, State, and local regulations to determine which regulation best applies to identified source.

[Proceed to Decision 1.10.3.3](#)

Decision 1.10.3.3 – Is the Regulation that Applies an Area Source NESHAP?

Role: Base Air Program Manager

Estimated Completion Time: N/A

The Base Air Program Manager determines whether the applicable regulation is an area source NESHAP. If the regulation is an area source NESHAP, the Base Air Program Manager determines whether or not the regulation requires the area source to obtain a Title V permit. If no, than the Base Air Program Manager conducts an applicability analysis.

[If 'Yes', proceed to Decision 1.10.3.4.](#)

[If 'No', proceed to Step 1.10.3.6.](#)

Decision 1.10.3.4 – Does the Regulation Require Area Source to Obtain Title V?**Role: Base Air Program Manager****Estimated Completion Time: N/A**

The Base Air Program Manager determines whether the regulations require the area source to obtain a Title V permit. If yes, then the Base Air Program Manager prepares the permit application as the first step in the Create New Permit process. If the regulation does not require a Title V the Base Air Program Manager conducts an applicability analysis.

[If 'Yes', proceed to Process 1.10.1.](#)

[If 'No', proceed to Step 1.10.3.6.](#)

Decision 1.10.3.5 – Is State Permit Required?**Role: Base Air Program Manager****Estimated Completion Time: N/A**

The Base Air Program Manager determines whether a state permit is required. If so, the Base Air Program Manager proceeds to the Create New Permit process. If the regulations do not require the area source to obtain a Title V permit or a state permit than no permit is required and the process ends.

[If 'Yes', proceed to Process 1.10.1.](#)

[If 'No', End.](#)

Step 1.10.3.6 – Conduct Applicability Analysis**Role: Base Air Program Manager****Estimated Completion Time: N/A**

If the regulation does not require a Title V or state permit than the Base Air Program Manager

[Proceed to Decision 1.10.3.7.](#)

Decision 1.10.3.7 – Exceeded Applicable de Minimis Threshold?**Role: Base Air Program Manager****Estimated Completion Time: N/A**

After completing the applicability analysis, the Base Air Program Managers determines whether the analysis exceeds the applicable de minimis threshold. If yes, then the Base Air Program Manager determines whether actions can be taken to limit PTE. If no, than determine whether a state permit is required.

[If 'Yes', proceed to Decision 1.10.3.8.](#)

[If 'No', proceed to Decision 1.10.3.5.](#)

Decision 1.10.3.8 – Can Action be Taken to Limit PTE?**Role: Base Air Program Manager****Estimated Completion Time: N/A**

The Base Air Program Manager determines whether actions can be taken to limit PTE. If actions can be taken to limit PTE, the Base Air Program Manager determines whether a state permit is required. If not, than he/she obtains the applicable permit.

[If 'Yes', proceed to Decision 1.10.3.5.](#)

[If 'No', proceed to Step 1.10.3.9.](#)

Step 1.10.3.9 – Obtain Applicable Permit

Role: Base Air Program Manager

Estimated Completion Time: N/A

If actions cannot be taken to limit PTE than the Base Air Program Manager needs to obtain the applicable permit for the identified area source.

[Proceed to Process 1.10.1 Create New Permit.](#)

E. References and Resources

1. Templates

1. N/A

2. Policies and Regulations

1. N/A

3. Forms

1. N/A

4. Documents

1. N/A

5. File Directories

1. N/A

6. Websites

1. N/A

7. Systems

1. N/A

F. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Identify Source Type and Size<ul style="list-style-type: none">• Determine Regulation that Potentially Applies• Is the Regulation that Applies an Area Source NESHAP?• Does the Regulation Require Area Source to Obtain Title V?<ul style="list-style-type: none">• Is State Permit Required?• Conduct Applicability Analysis<ul style="list-style-type: none">• Exceeded Applicable de Minimis Threshold?• Obtain Applicable Permit

G. Advice and Tips

- N/A

1.10.4 – Air Dispersion Modeling

A. Narrative

Many permitting activities may require an air dispersion model as part of the permit application process (e.g., ARMOD, screen models). Air dispersion modeling requires data collection, model inputs and outputs and interpretation of results to support requirements in the permit application. Unless the Base Air Program Manager has had some specific training in this area, it is recommended that he or she plan and budget for contract support for the important activity. Base Air Program Managers should work with their MAJCOM counterpart to program and budget for these funds to support this process.

Air Dispersion Modeling is also used in the permitting process as well as for estimating emissions, banking credits, examining the consequences of air emissions. The Base Air Program should research state and local regulations, state implementation plans (SIPs) to understand when modeling is required.

B. References and Resources

1. **Templates**
 - a. N/A
2. **Policies and Regulations**
 - a. Clean Air Act
3. **Forms**
 - a. N/A
4. **Documents**
 - a. N/A
5. **File Directories**
 - a. N/A
6. **Websites**
 - a. N/A
7. **Systems**
 - a. N/A

C. Advice and Tips

- N/A

1.10.5 – Open Burning/Prescribed Burning Permits

A. Narrative

As prescribed by your local regulatory agency, any open burning or prescribed burning to clear federal lands, control fires, or clear areas for military training may require a permit.

Each Base Air Program Manager should inquire and work with their State regulatory agencies as how to this process is administrated. At a minimum, when any prescribed open burning is required the Base Air Program Manager will obtain any required permit(s) for this process prior to the activity taking place and comply with all requirements for that permit during this activity.

Additionally, Base Air Program Manager should research and communicate with local and state agencies regarding other types of permits that would be required for open burning or detonation of energetic materials for other purposes besides clearing land.

B. References and Resources

1. **Templates**
 - a. N/A
2. **Policies and Regulations**
 - a. Clean Air Act
 - b. Air Quality Policy on Wild land and Prescribed Burns
3. **Forms**
 - a. N/A
4. **Documents**
 - a. N/A
5. **File Directories**
 - a. N/A
6. **Websites**
 - a. N/A
7. **Systems**
 - a. N/A

C. Advice and Tips

- N/A

1.11 - IT Requirements

A. Narrative

The Air Program Information Management System (APIMS) is the only approved Air Quality Management System that can be used by all Air Force bases. Because of IT restrictions, no individual command, base or Base level Air Quality Program Manager can go out without approval and purchase any other COTS air quality system. If Base Air Program Manager determines that his or her base requirements are not complicated enough to require an AQ Management System, they can maintain their inventory permits in Excel spreadsheets. This is the only authorized deviation from using APIMS.

Base Air Program Manager can budget for contract support for data collection and report preparation for an approved requirement. Management of all the associated data will be done either in APIMS or can be done in an Excel spreadsheet maintained at the base when it is justified by the Base Air Program Manager.

If APIMS has not been implemented at your base, contact the AF AQSME at AFCEE to make arrangements and schedule an APIMS implementation at your base or have a demonstration of APIMS capabilities to determine whether it is needed or not at your base.

HQ AF/A7CIO is engaged in a process to select the Next Gen IT systems for all CE Processes/media. During this process, no MAJCOM or base is authorized without approval to purchase any new IT systems. The Air Quality program management in the Air Force use APIMS until this process is completed and new systems are designated.

B. References and Resources

1. **Templates**
 - a. N/A
2. **Policies and Regulations**
 - a. N/A
3. **Forms**
 - a. N/A
4. **Documents**
 - a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. APIMS

C. Advice and Tips

- N/A

1.12 – Contract Management

A. Narrative

It is important to identify which of the following types of contracts below best fit the needs of a project:

1. Firm Fixed Price
 - a. Well defined requirements
 - b. Contractor assumes risk of cost overruns
2. Cost + Fixed Fee
 - a. Contractor gets cost + a fixed fee
 - b. Better for projects that cannot define all requirements well/specifically
 - c. Government assumes risk for cost overruns
3. Cost + Award Fee
 - a. Cost + an award percentage of the contract
4. Cost + Incentive Fee
 - a. Cost + a percentage after a milestone is reached
5. Time and Materials
 - a. Pay for all time and materials
 - b. Most cost risk to the Government
 - c. Requires a lot of oversight to ensure hours are valid

Determine the best avenue to provide contract support. Contracts can go to the local contracting office, AFCEE, Army Corp of Engineers, AETC, and GSA. Outside the Air Force, contracts require the use of a MIPR IAW AFI 65-116. Fees, centralized or decentralized ordering, how quality assurance will be ensured, contract lead time, and responsiveness to urgent requests are factors that should be considered when determining the best avenue.

For services, it is important to determine if the task will be severable. The contract task can be severed before completion and the government receives some benefit, but the contract period of performance (POP) can only be for 1 year or less. If the task is non-severable, then the contract cannot be severed prior to the end of the POP or the government will not receive benefits.

Contract planning includes activities such as, developing a Statement of Work (SOW), determining the schedule/milestones, conducting market research, developing progress reports, creating a management review process, and an independent government cost estimate (IGE).

Determine contracting timelines as to when the contracting office needs the SOW, IGE, and funding to award the contract in a timely manner. Pay attention to MAJCOM's current year funds commitment and obligation goals. Plan the contracting strategy to achieve these goals. Allow time for bid preparation, review of bids, negotiation of costs if needed and time for the contracting officer to award the contract.

Contract management includes the following:

- Kick-off meeting with the contractor after contract award
- Monitor contractor performance
- Review deliverables
- Validate invoices for payment by CO
- Review progress reports and attend PMRs with the contractor and CO

Validation of invoices for payment must be done in a timely manner to prevent interest of unpaid invoices being charged to the Wing Commander's budget.

[Proceed to Process 1.3 Budgeting.](#)

B. References and Resources

1. Templates

1. N/A

2. Policies and Regulations

1. N/A

3. Forms

1. MIPRs
2. AF Form 616
3. AF Form 9
4. AF Form 36

4. Documents

1. AFIT Course for Contract Management
2. AFCEE AQ Handout Contracting Section

5. File Directories

1. N/A

6. Websites

1. Defense Acquisition University

7. Systems

1. N/A

C. Advice and Tips

- Contract Management is a highly complex subject matter when dealing with Air Quality. Air Quality Program Managers should enroll in AFIT 531-ENV to learn more about the contract management process. Additionally, Air Quality Program Managers should explore courses at Acquisition University which offers several levels of certifications dealing with contract management. These courses will provide a deeper understanding of the procurement and acquisition process as well as the other major components of the contract management process.

1.13 – State Implementation Plan

A. Narrative

State Implementation Plans (SIPs) are state plans for the establishment, regulation, and enforcement of air pollution standards. SIPs approved by the EPA are the federally-enforceable plans for each State which identifies how that State will attain and/or maintain the primary and secondary National Ambient Air Quality Standards (NAAQS) set forth in Section 109 of the Clean Air Act (CAA) and 40 Code of Federal

Regulations 50.4 through 50.12. SIPs generally establish emission limitations for various types of stationary sources and require permits for construction, modifications, and operation of sources of air pollutants. Each State is required to have a SIP which contains the control measures and strategies developed through a public process, formally adopted by the State, and submitted by the Governor's designee to EPA (which EPA must formally act on) as revisions to their plan to attain and maintain the national ambient air quality standards. In the event EPA determines that a state's SIP does not meet the minimum criteria or disapproves of a SIP, EPA must promulgate a federal Implementation Plan (FIP) within 2 years (unless the state corrects the deficiency).

Installations work with state agencies to develop/revise SIPs to ensure emissions data, growth emissions allowance, emissions projections, etc. and are included in SIP development. If SIP cannot accommodate emissions for a particular project it may not go forward due to General Conformity. It is critical that Air Program Managers are aware of future emissions plans for the base. Even if the base is an attainment area, Program manager need to monitor changes to NAAQS that may impact attainment status.

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. Clean Air Act
- b. Clean Air Act, Section 110, Part D
- c. 40 CFR 51
- d. 40 CFR 52

3. Forms

- a. N/A

4. Documents

- a. SIP Guidance Document
- b. SIP Presentation

5. File Directories

- a. N/A

6. Websites

- a. Online SIP Processing Manual

7. Systems

- a. N/A

C. Advice and Tips

- Installation Base Air Program Managers are encouraged to get involved with the SIP process. Accordingly, the Base Air Program Managers should work with the state to obtain allowances to put into the SIP for projected growth at an installation affords the installation more flexibility, particularly if the installation is required to do a conformity study. By budgeting future growth allowances already into the SIP, installation allows the installation to proceed with the project.

1.14 – New Source Performance Standards (NSPS)

E. Narrative

Process 1.14 – New Source Performance Standards

Estimated Completion Time: N/A

Section 111 of the Clean Air Act, "Standards of Performance of New Stationary Sources," requires EPA to establish federal emission standards for source categories which cause or contribute significantly to air pollution. These standards are intended to promote use of the best air pollution control technologies, taking into account the cost of such technology and any other non-air quality, health, and environmental impact and energy requirements. These standards apply to sources which have been constructed or modified since the proposal of the standard. Since December 23, 1971, the Administrator has promulgated 88 such standards and associated test methods. These standards can be found in the Code of Federal Regulations at Title 40 (Protection of Environment), Part 60 (Standards of Performance for New Stationary Sources). To date, only criteria pollutants are regulated under NSPS. (NESHAPS regulates Hazardous Air Pollutants.)

Decision 1.14.1 – Is Action Applicable?

Role: Base Level Air Quality Program Manager

Estimated Completion Time: N/A

To determine if the action is subject to NSPS requirements, check the list of regulated industrial sources identified in 40 CFR Part 60 or for the list go to: 40 CFR Part 60 - Standards of Performance for New Stationary Sources (NSPS)

Most of the industrial sources listed do not operate on Air Force installations. However, some source categories that could apply are:

- Fossil-Fuel-Fired Steam Generators (Subpart D)
- Petroleum Storage Vessels (Sub part K)
- Sewage Treatment Plants (Subpart O)
- Stationary Gas Turbines (Subpart GG)
- Bulk Gasoline Terminals (Subpart XX)
- Solid Waste Landfills (Subpart WWW)
- Coal-Fired Electric Steam Generating Units (Subpart HHHH)
- Stationary Internal Combustion Engines (Subparts IIII and JJJJ)
- Stationary Combustion Turbines (Subpart KKKK)

[If "Yes", proceed to Decision 1.14.2.](#)

[If "No", proceed to Decision 1.14.3.](#)

Decision 1.14.2 – Does Date of Action Apply?

Role: Base Level Air Quality Program Manager

Estimated Completion Time: N/A

Once it has been determined that the action is a new or modified source that is included in a listed source category, further NSPS requirements for date of operations need to be checked. Each source category listed under NSPS has dates for which the requirements apply. The dates of service vary among the listed source categories.

If “Yes”, proceed to Decision 1.14.3.

If “No”, End.

Decision 1.14.3 – Does Threshold Apply?

Role: Base Level Air Quality Program Manager

Estimated Completion Time: N/A

If “Yes”, proceed to Step 4.

If “No”, End.

Step 1.14.4 – Identify Requirements

Role: Base Level Air Quality Program Manager

Estimated Completion Time: N/A

For each NSPS source 40 CFR 60 lists at least one emission limitation and/or operations good practice as NSPS. In addition, there are requirements for:

- Monitoring (emissions and operations)

- Testing
- Record keeping
- Compliance reporting

The requirements for each source category can include multiple emission limitations or good practices as well as multiple monitoring and testing requirements. These need to be identified for each source and for some sources for each phase.

[Proceed to Decision 1.14.5.](#)

Decision 1.14.5 – Compliance Possible?

Role: Base Level Air Quality Program Manager

Estimated Completion Time: N/A

In addition to date requirements, there are source design requirements that identify thresholds for such things as throughput capacity (such as size of the unit) or energy produced (megawatts of power produced). In some cases there are multiple design requirements depending on type of equipment used and control technology imposed.

Consult the source design requirements to see if the action exceeds any of these design features and maybe be subject to NSPS.

It must be determined if the action can operate in compliance with all of the NSPS standards. If not, the USAF can investigate mitigation, redesign, or reducing the site-wide emission caps.

[If “Yes”, proceed to Decision 1.14.6.](#)

[If “No”, proceed to Step 1.14.8.](#)

Decision 1.14.6 – Does Action Require Operating Permit or Revision to Existing Permit?

Role: Base Level Air Quality Program Manager

Estimated Completion Time: N/A

The action regarding a new or modified source may require new permitting requirements to either an existing operating permit or to the application of new permit. If there is some question about whether further permitting is required, consult with the permitting agency for guidance.

The processes identified in the *Managing Title V Permit Process* can be followed if there are additional permitting requirements.

[If "Yes", proceed to Process 2.2 Managing Title V Permit Process.](#)

[If "No", proceed to Step 1.14.7.](#)

Step 1.14.7 – Maintain Compliance Management

Role: Base Level Air Quality Program Manager

Estimated Completion Time: N/A

Once the USAF has determined the applicability of the NSPS requirements for dealing with the action and has complied with regulatory permitting requirements, compliance with implementation and operation of the action starts. This includes monitoring emissions and operating conditions and timely reporting the results to the agency, as required. Compliance can also include training staff for good operating practices. Also, source testing may also be required. Lastly, the Air Force needs to monitor any other changes that could affect emissions for the action and consult with the agency on any changes which could affect status.

Any important component to compliance requires keeping and maintaining good records. In the event of an inspection by the regulatory agency, the records are one of the most important sources an inspector uses to determine compliance.

End.

Step 1.14.8 – Develop Emissions Reductions Caps or Mitigations

Role: Base Level Air Quality Program Manager

Estimated Completion Time: N/A

End.

F. References and Resources

- 1. **Templates**
 - a. N/A
- 2. **Policies and Regulations**
 - a. 40 CFR 60
- 3. **Forms**
 - a. N/A
- 4. **Documents**
 - a. N/A
- 5. **File Directories**
 - a. N/A
- 6. **Websites**
 - a. N/A
- 7. **Systems**
 - a. N/A

G. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Is Action Applicable?<ul style="list-style-type: none">• Does Date of Action Apply?• Does Threshold Apply?• Identify Requirements• Compliance Possible?• Develop Emissions Reductions, Caps, or Mitigations• Does Action Require Operating Permit Revision to Existing Permit• Maintain Compliance Management• Title V Synthetic Minor Permitting Process

H. Advice and Tips

- N/A

2.0 Implementation and Operation

2.1 – Air Emissions Inventory for Stationary and Mobile Source Processes

A. Narrative

Process 2.1 – Air Emissions Inventory for Stationary and Mobile Sources

Estimated Completion Time: N/A

Mobile and stationary source process provides a course of action for updating mobile and stationary source inventory and producing emissions reports based on updated inventory.

Bases need to have an Air Force Policy or regulatory driver in place and each vary from state to state. Fees are based on what each base produces and every base will have some kind of deviation that will put them over 5%.

[Entry from Process 3.2 Record Systems and Reporting Process.](#)

Decision 2.1.1 – Does the base have existing inventory?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine if the base has existing inventory.

[If 'Yes', proceed to Decision 2.1.2.](#)

[If 'No', proceed to 1.10.3 Determine Type of Permit Required Process.](#)

Decision 2.1.2 – Is the Existing Inventory Suitable for the Applications Required?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine if the existing inventory is suitable for the applications required. It is suitable if the existing inventory does not exceed 5%. If it is suitable, then no further action is required.

[If 'Yes', End.](#)

[If 'No', proceed to Step 2.1.3](#)

Step 2.1.3 – Modify Existing Inventory

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine the type of inventory the base requires if the base does not have the existing inventory.

[Proceed to 1.10.3 Determine Type of Permit Required Process.](#)

Decision 2.1.4 – Stationary and Mobile?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine if the inventory needed is stationary or mobile.

[If 'Stationary', proceed to Decision 2.1.4b.](#)
[If 'Mobile', proceed to Decision 2.1.4a.](#)

Decision 2.1.4a – Is Mobile Source Inventory Required?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine if the inventory needed is mobile.

[If 'Yes', proceed to Step 2.1.5](#)
[If 'No', proceed to Decision 2.1.4.](#)

Decision 2.1.4b – Stationary Source Inventory Required?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine if the inventory needed is stationary.

[If 'Yes', proceed to Step 2.1.6.](#)
[If 'No', proceed to Decision 2.1.4.](#)

Step 2.1.5 – Identify Appropriate Methods and Tools to Calculate Emissions

Role: Base Air Program Manager

Estimated Completion Time: N/A

Identify the appropriate methods and tools to calculate the emissions for stationary source inventory.

[Proceed to 2.1.2 Emissions Factors Process.](#)

Step 2.1.6 – Identify Appropriate Methods and Tools to Calculate Emissions

Role: Base Air Program Manager

Estimated Completion Time: N/A

Identify the appropriate methods and tools to calculate the emissions for stationary source inventory.

[Proceed to Step 2.1.7 and 2.1.2 Emissions Factors.](#)

Step 2.1.7 – For Controlled Emissions Collect Source Test, Control Device, or Stack Data

Role: Base Air Program Manager

Estimated Completion Time: N/A

For controlled emissions, Base Air Program Manager will collect all relevant source tests, control devices, and stack data to determine if mobile source inventory is required

[Proceed to Decision 2.1.4.](#)

Decision 2.1.8 – Is Mobile Source Inventory Required?

Role: Base Air Program Manager
Estimated Completion Time: N/A

Determine if the inventory needed is stationary

[If 'Yes', proceed to Step 2.1.5.](#)

[If 'No', proceed to Step 2.1.9](#)

Step 2.1.9 – Request/Collect Source Data

Role: Base Air Program Manager
Estimated Completion Time: N/A

Base Air Program Manager will have to budget and obtain contract support to collect the data

[Proceed to Step 2.1.10.](#)

Step 2.1.10 – Calculate Emissions/APIMS

Role: Base Air Program Manager
Estimated Completion Time: N/A

Calculate the emissions by using APIMS or other approved database/spreadsheet and by utilizing the collected source data.

[Proceed to Step 2.1.11.](#)

Step 2.1.11 – QA/QC Data

Role: Base Air Program Manager
Estimated Completion Time: N/A

Check and verify the data for any errors of gaps.

[Proceed to Step 2.1.12.](#)

Step 2.1.12 – Generate Emissions Report

Role: Base Air Program Manager
Estimated Completion Time: N/A

Generate emissions report utilizing the collected and calculated data.

[Proceed to Step 2.1.13.](#)

Step 2.1.13 – Send Report as Required by Regulatory Agencies

Role: Base Air Program Manager
Estimated Completion Time: N/A

Send emissions report to regulatory agencies and AFCEE as required.

[Proceed to Step 2.1.14.](#)

Step 2.1.14 – Archive Inventory on Community of Practice (COP)

Role: AFCEE

Estimated Completion Time: N/A

Archive the emissions report on the Air Quality Manager's CoP.

End.

B. References and Resources

- 1. Templates**
 - a. N/A
- 2. Policies and Regulations**
 - a. AFI 32-7040
- 3. Forms**
 - a. N/A
- 4. Documents**
 - a. Stationary and Mobile Source Emissions Guide
 - b. AFMC SOP for Air Quality Stationary Source
- 5. File Directories**
 - a. N/A
- 6. Websites**
 - a. Air Quality Managers CoP
- 7. Systems**
 - a. APIMS

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Does the base have existing inventory?• Is the existing inventory suitable for the applications required• Determine the type of inventory needed• Stationary or Mobile?• Stationary source inventory required?• Identify the appropriate methods and tools to calculate the emissions for stationary• Collect source test, control device, or stack data• Is mobile source inventory required?• Request/Collect Source Data• Calculate emissions/APIMS• QA/QC data• Generate emissions report• Send report as required by regulatory agencies• Mobile source inventory required?• Identify the appropriate methods and tools to calculate the emissions for stationary

AFCEE	<ul style="list-style-type: none">• Archive Inventory on CoP
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D. Advice and Tips

- N/A

2.2 – Managing Title V Permit

A. Narrative

Establish and maintain a program to manage a Title V Permit to ensure compliance with permit requirements and avoid notices of violation and potential fines.

[Entry from Process 1.10.3 Determine Type of Permit Required Process.](#)
[Entry from Process 3.2 Record Keeping System and Requirements Process.](#)

Step 2.2.1 – Review Permitting Requirements

Role: Base Air Program Manager
Estimated Completion Time: N/A

Review operating permit to determine the requirements that the installation and source operators must comply with. Such requirements include recordkeeping requirements, reporting requirements, monitoring requirements, source testing, and operational/equipment limits such as emission limits, hours of operation, fuel type, VOC content limits, as well as others. Identifying these permit parameters will help the base air program manager in establishing an effective permit management program.

[Proceed to Step 2.2.2.](#)

Step 2.2.2 – Visit Shops

Role: Base Air Program Manager
Estimated Completion Time: N/A

Visit shop personnel to familiarize them with permit conditions, recordkeeping, and reporting requirements and any other responsibilities that are established in the permit and that apply to their operations. This will ensure that the shops are aware of the permit conditions that apply to their operations. Many shops will need to keep records in accordance with applicable permit conditions. In such instances, the installation air program manager should assist, as necessary, shop managers in developing an appropriate recordkeeping system.

[Proceed to Step 2.2.3.](#)

Step 2.2.3 – Develop Operating Checklist and Post Operating Conditions

Role: Base Air Program Manager
Estimated Completion Time: N/A

Compile checklists consisting of permit conditions and threshold limits that apply to shop operations so that personnel manage their operations in accordance with permit conditions. The air program manager should be notified immediately if any deviations from permit conditions occur. Any deviation noted in operations at the shop level should be communicated by the air program manager to the appropriate state/local regulatory agency.

[Proceed to Step 2.2.4](#)

Step 2.2.4 – Provide Training Material to Source Manager

Role: Base Air Program Manager

Estimated Completion Time: N/A

Ensure that source operators are competent in maintaining records and are knowledgeable of permit conditions as it relates to their shop operations. Approaches to accomplishing this objective would be to incorporate training slides into cross-functional team meetings attended by unit environmental coordinators on a regular basis.

[Proceed to Step 2.2.5.](#)

Step 2.2.5. – Train Shop Personnel

Role: Base Air Program Manager & Source Manager

Estimated Completion Time: N/A

Provide materials to the source manager for training purposes to ensure that all personnel are knowledgeable in the permit conditions as it relates to their shop operations. Ensure shop managers understand—and are aware of—permit conditions that apply to shop operations. Once this is accomplished, work with the shop managers to ensure shop personnel are trained regarding applicable permit conditions. The training of shop personnel may be conducted by shop managers, or the training may be accomplished in a joint effort by the installation air program manager and shop manager.

The training objective should make it clear to shop personnel that their official job duties include ensuring compliance with permit conditions that apply to the shop's operations. One method of ensuring shop personnel maintain an awareness of permit conditions/requirements is to post a checklist of permit conditions in a conspicuous location near a piece of equipment that is covered by the permit.

If a recordkeeping system will be used to track data that must be kept in accordance with the permit, then ensure that shop personnel understand how to manage/use the recordkeeping system (e.g., data entry, report generation, etc.).

Base Air Program Managers should work with shop managers to conduct periodic quality assurance/quality control (QA/QC) checks to ensure the shops are complying with the permit conditions that apply to their operations. For instance, consider corrosion control shop on an installation that is subject to limits on emissions of volatile organic compounds (VOCs). It could occur that new coatings are acquisitioned to replace existing coatings and the new coating constituents and/or the VOC content of the new coatings may differ from the constituents and/or the VOC content of the existing coatings. In such instances, it may be necessary to update the algorithms in the software used to calculate VOC emissions to ensure VOC emissions calculations are accurate. A QA/QC program could include periodically checking VOC calculation algorithms to ensure they result in accurate calculations of VOCs from coatings used by the shop.

[Proceed to Step 2.2.6.](#)

Step 2.2.6 – Maintain Operational Compliance

Role: Source Manager

Estimated Completion Time: N/A

Shops will ensure that personnel are continuously trained, equipment is routinely maintained to minimize emissions and data is consistently managed according to guidelines set forth in the operating permit.

[Proceed to Step 2.2.7.](#)

Step 2.2.7 – Prepare Materials For Certification

Role: Source Manager

Estimated Completion Time: N/A

Prepare materials for Base Air Program Manager to ensure he/she can present sufficient information to regulators upon inspection and to have current information on hand to meet permit compliance.

[Proceed to Step 2.2.8.](#)

Step 2.2.8 – Gather Records

Role: Base Air Program Manager

Estimated Completion Time: N/A

Utilizing the established recordkeeping system, collect data from shops in accordance with record retention guidelines and conditions established in the permit so that permit compliance can be demonstrated to the regulators upon inspection. If inspected by a state or local agency, air program managers should be able to produce information sufficient to determine permit compliance in a timely manner. For instance, records required by the permit should be easily accessible and provided for review to a compliance inspector.

[Proceed to Step 2.2.9.](#)

Step 2.2.9 – Prepare Compliance Certification

Role: Base Air Program Manager

Estimated Completion Time: N/A

Using data collected from an established recordkeeping system, create and distribute a compliance certification package in accordance with permit requirements. The package should address emission sources covered in the installation permit and indicate compliance or non-compliance for the identified sources with applicable requirements during the specified certification period. The completed compliance certification should be routed for signature for the source owners and ultimately the responsible official.

[Proceed to Step 2.2.10.](#)

Step 2.2.10 – Conduct Legal Review

Role: Base Judge Advocate (JA)

Estimated Completion Time: N/A

The completed compliance certification package should be submitted to the appropriate base legal JA for review and comment.

[Proceed to Step 2.2.11](#)

Step 2.2.11 – Submit Compliance Certification

Role: Base Air Program Manager
Estimated Completion Time: N/A

Once the completed compliance certification package is signed by the responsible official and approved by base JA, the packaged should be submitted to the appropriate regulatory agency via certifiable mail to confirm and document receipt by the regulatory agency prior to the required deadline.

[Proceed to Step 2.2.12.](#)

Step 2.2.12 – Provide Oversight for Compliance

Role: Base Air Program Manager
Estimated Completion Time: N/A

Ensure that compliance requirements for the base are identified, understood and met by the base leadership and air emission source owners. Establish and maintain a program to monitor and document compliance with requirements. Coordinate with regulatory agencies on any issues of potential non-compliance. Identify and obtain guidance on potential new regulations to allow for proper planning to meet potential requirements.

[Proceed Process to 3.1 Operating Permits Continuous Compliance Process.](#)

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. N/A

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. APIMS

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Reviews permitting requirements• Uses Establish Record Keeping and System Requirements process• Visits shops

	<ul style="list-style-type: none"> • Develops operating checklist and post operating Conditions • provides training material to Source Manager • Trains Shop Personnel • Gathers records • Prepares compliance certification • Submits compliance certification • Provides oversight for compliance • Uses Operating Permits Continuous Compliance Process
Source Manager	<ul style="list-style-type: none"> • Trains Shop Personnel with Base Air Program Manager • Maintains Operational Compliance
Base Judge Advocate (JA)	<ul style="list-style-type: none"> • Conducts legal review

D. Advice and Tips

- Check and review all records for data gaps, monitor attendance at meetings where training is provided, routinely visit shops to ensure records are kept as required and equipment is being maintained appropriately.

2.3 – Managing State Operating Permits

A. Narrative

Most likely, a permit to construct/permit to operate will be issued via a state’s minor new source review (NSR) program. In some instances, a federal NSR permit may be required (if major source NSR thresholds are exceeded). Once a state issues a permit to construct, the conditions in the permit will need to be rolled into the installation’s Clean Air Act Title V permit, assuming the installation has a Title V permit. Some permitting authorities require the conditions of a construction/operating permit to be rolled into a Title V permit immediately, whereas other permitting authorities allow Title V facilities to roll conditions of a new operating/construction permit into the Title V permit when the Title V permit is renewed, which occurs every 5 years. For non-title V facilities, the operating permit for a newly constructed emissions source is a separate permit from the construction permit. Construction permits typically cover the period from the time the emissions source commences construction until the emissions source become fully operational. Accordingly, operating permits need to be obtained before a new emissions source becomes operational.

The steps below represent the typical procedure that an installation should follow in regards to managing a construction/operating permit for an emissions source.

[Entry from 1.10.3 Determine Type of Permit Required Process.](#)

[Entry from 3.2 Record Keeping System and Requirements Process.](#)

Step 2.3.1 – Review Permitting Requirements

Role: Base Air Program Manager

Estimated Completion Time: N/A

Review operating permit to determine the requirements that the installation and source operators must comply with. Such requirements include recordkeeping requirements, reporting requirements, monitoring requirements, source testing, and operational/equipment limits such as emission limits,

hours of operation, fuel type, VOC content limits, as well as others. Identifying these permit parameters will help the base air program manager in establishing an effective permit management program.

[Proceed to Step 2.3.2.](#)

Step 2.3.2 – Visit Shops

Role: Base Air Program Manager

Estimated Completion Time: N/A

Visit shop personnel to familiarize them with permit conditions, recordkeeping, and reporting requirements and any other responsibilities that are established in the permit and that apply to their operations. This will ensure that the shops are aware of the permit conditions that apply to their operations. Many shops will need to keep records in accordance with applicable permit conditions. In such instances, the Base Air Program Manager should assist, as necessary, shop managers in developing an appropriate recordkeeping system.

[Proceed to Step 2.3.3.](#)

Step 2.3.3 – Develop Operating Checklist and Post Operating Conditions

Role: Base Air Program Manager

Estimated Completion Time: N/A

Compile checklists consisting of permit conditions and threshold limits that apply to shop operations so that personnel manage their operations in accordance with permit conditions. The air program manager should be notified immediately if any deviations from permit conditions occur. Any deviation noted in operations at the shop level should be communicated by the Base Air Program Manager to the appropriate state/local regulatory agency.

[Proceed to Step 2.3.4.](#)

Step 2.3.4 – Provide Training Material to Source Manager

Role: Base Air Program Manager

Estimated Completion Time: N/A

Ensure that source operators are competent in maintaining records and are knowledgeable of permit conditions as it relates to their shop operations. Approaches to accomplishing this objective would be to incorporate training slides into cross-functional team meetings attended by unit environmental coordinators on a regular basis.

[Proceed to Step 2.3.5.](#)

Step 2.3.5 – Train Shop Personnel

Role: Base Air Program Manager & Source Manager

Estimated Completion Time: N/A

Provide materials to the source manager for training purposes to ensure that all personnel are knowledgeable in the permit conditions as it relates to their shop operations. Ensure shop managers understand—and are aware of—permit conditions that apply to shop operations. Once this is accomplished, work with the shop managers to ensure shop personnel are trained regarding applicable permit conditions. The training of shop personnel may be conducted by shop managers,

or the training may be accomplished in a joint effort by the Base Air Program Manager and Shop Manager.

The training objective should make it clear to shop personnel that their official job duties include ensuring compliance with permit conditions that apply to the shop's operations. One method of ensuring shop personnel maintain an awareness of permit conditions/requirements is to post a checklist of permit conditions in a conspicuous location near a piece of equipment that is covered by the permit.

If a recordkeeping system will be used to track data that must be kept in accordance with the permit, then ensure that shop personnel understand how to manage/use the recordkeeping system (e.g., data entry, report generation, etc.).

Base Air Program Managers should work with shop managers to conduct periodic quality assurance/quality control (QA/QC) checks to ensure the shops are complying with the permit conditions that apply to their operations. For instance, consider corrosion control shop on an installation that is subject to limits on emissions of volatile organic compounds (VOCs). It could occur that new coatings are acquisitioned to replace existing coatings and the new coating constituents and/or the VOC content of the new coatings may differ from the constituents and/or the VOC content of the existing coatings. In such instances, it may be necessary to update the algorithms in the software used to calculate VOC emissions to ensure VOC emissions calculations are accurate. A QA/QC program could include periodically checking VOC calculation algorithms to ensure they result in accurate calculations of VOCs from coatings used by the shop.

[Proceed to Step 2.3.6.](#)

Step 2.3.6 – Maintain Operational Compliance

Role: Source Manager

Estimated Completion Time: N/A

Shops will ensure that personnel are continuously trained, equipment is routinely maintained to minimize emissions and data is consistently managed according to guidelines set forth in the operating permit.

[Proceed to Step 2.3.7.](#)

Step 2.3.7 – Gather Records

Role: Base Air Program Manager

Estimated Completion Time: N/A

Utilizing the established recordkeeping system, collect data from shops in accordance with record retention guidelines and conditions established in the permit so that permit compliance can be demonstrated to the regulators upon inspection. If inspected by a state or local agency, Base Air Program Managers should be able to produce information sufficient to determine permit compliance in a timely manner. For instance, records required by the permit should be easily accessible and provided for review to a compliance inspector.

[Proceed to 3.1 Operating Permits Continuous Compliance Process.](#)

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. N/A

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. APIMS

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Review Permitting Requirements• Establish Record Keeping and System Requirements• Visit Shops• Develop Operating Checklist and Post Operating Conditions• Provide Training Material to Source Manager• Train Shop Personnel• Gather Records• Operating Permits Continuous Compliance Process
Source Manager	<ul style="list-style-type: none">• Train Shop Personnel• Maintain Operational Compliance

D. Advice and Tips

- N/A

2.4 – Manage Mobile Sources

A. Narrative

Regulation of Mobile Sources has increased by states and EPA. Installations in non-attainment areas and maintenance areas should keep updated Mobile Source Inventory for General Conformity purposes. With the development of Greenhouse Gas regulations, all installations will eventually need to track mobile sources.

Mobile Source Inventory development most likely requires contract support and is managed at the MAJCOM level. Base Planning Personnel gather data from traffic studies, air field operations, and other sources to compile Mobile Source data. For example, CAA Section 118 (c) preempts states regulating military tactical vehicles. This is important to know as states develop controls for mobile source diesel emissions, such as regulations governing idling diesel vehicles. The Emissions Control Technology and

Alternative Fuels-Fuels Data Process should be used as a cross-reference when developing the mobile source inventory. Also ensure that sources treated as mobile sources, such as AGE-Aerospace Ground Support Equipment meet the definition of non-road engine per 40 CFR 82, otherwise it will be considered a stationary source and potentially subject to permitting. Base Air Program Managers should consult REOs for guidance.

B. References and Resources

- 1. Templates**
 - a. N/A
- 2. Policies and Regulations**
 - a. 40 CFR 82
- 3. Forms**
 - a. N/A
- 4. Documents**
 - a. Stationary and Mobile Source Emissions Guide
- 5. File Directories**
 - a. N/A
- 6. Websites**
 - a. EPA Transportation and Air Quality Website
- 7. Systems**
 - a. APIMS

C. Advice and Tips

- N/A

2.5 – Ozone Depleting Substances (ODS) Management Process

A. Narrative

The Environmental Protection Agency (EPA) enforces ODS management pursuant to CAA Title VI Section 106-117. Air Program Managers should endeavor to maintain a compliant ODS Management program. Ozone Depleting Substances addressed by an installation management plan include refrigerants, halons and other miscellaneous-use chemicals (see EPA list of Class One of ODS Substances). Important to note, ODS enforcement has not been delegated to states. Accordingly, EPA is the enforcement authority for ODS Compliance Management and can issue fines for violations of applicable requirements. Consequently, ODS inspections is a high enforcement area for regulators. Air managers should ensure they maintain an inventory of ODS equipment and that all operators/technicians on the installation are certified.

Class II ODS consists of chemicals with an ozone-depletion potential of less than 0.2. It is important to note that the Air Program Manager must account for Class II ODS in the base's GHG inventory, if applicable.

APIMS contains a ODS compliance management module capable of tracking all data required to comply with current Air Force and Federal regulations.

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. AFI 32-7040
- b. AFI 32-7086
- c. Clean Air Act, Title VI
- d. Clean Air Act, Title VII
- e. 40 CFR 82

3. Forms

- a. DoD Form 1149

4. Documents

- a. AFIT ODS Management Presentation
- b. Ozone Depleting Substances Plan 2009 (Hurlburt Field)

5. File Directories

- a. N/A

6. Websites

- a. Air Quality Mangers COP
- b. EPA List of Class One of ODS Substances

7. Systems

- a. APIMS

C. Advice and Tips

- The Base Air Program Manager should review the ODS Management Plan and identify gaps to comply with CAA Title VI and AFCESA Refrigerant Handbook. If gaps are identified, the ODS Management should be revised to meet standards of CAA Title VI and AFCESA Refrigerant Handbook. For example, ensure the ODS Management plan includes a phase out plan and up to date inventory of equipment containing over 50 lbs of ODS Class I or II refrigerants. Any excess class I reserves have to be turned into Defense Logistics Agency ODS Class I Defense Reserve Bank and recorded. A completed DD-Form 1149 must be provided with the turn-in to DLA

2.6 – Emissions Monitoring

A. Narrative

State and Federal regulations may include monitoring requirements that bases have to comply with based on source type and size. Typically, monitoring requirements are addressed in the bases' permit.

Base Air Program Managers may be able to negotiate monitoring requirements with regulators. Monitoring requirements may stipulate a monitor be installed. This can be accomplished by programming a project through AQ POM process. Sampling, Analysis, and Monitoring (SAM) is an example of a project funded through the AQ POM process. Another example is Continuous Emissions Monitoring (CEM).

B. References and Resources

- 1. Templates**
 - a. N/A
- 2. Policies and Regulations**
 - a. N/A
- 3. Forms**
 - a. N/A
- 4. Documents**
 - a. EPA Periodic Monitoring
- 5. File Directories**
 - a. N/A
- 6. Websites**
 - a. EPA Emission Measurements Center
- 7. Systems**
 - a. N/A

C. Advice and Tips

- N/A

3.0 Compliance and Checking Corrective Actions

3.1 – Operating Permits Continuous compliance for Title V Process

A. Narrative

A Base Air Program Manager is required to manage Air Quality Permits so as to be in continuous compliance with applicable requirements of the permit. Certain responsibilities include:

- Performing all permit required actions on the schedule defined in the permit
- Keeping all records required by the permit for the specified time frame
- Filing all reports required by the permit in a timely manner
- Checking EPA enforcement websites for EA
- Reporting notifications of excess emissions to EPA/state and MAJCOM
- Populating the EA database.

The Program Manager should maintain a continuity book as a resource for a new Base Air Program Manager to quickly learn what steps and provisions the previous Base Air Program Manager had put in place to stay in compliance.

B. References and Resources

1. **Templates**

- a. N/A

2. **Policies and Regulations**

- a. N/A

3. **Forms**

- a. N/A

4. **Documents**

- a. N/A

5. **File Directories**

- a. N/A

6. **Websites**

- a. N/A

7. **Systems**

- a. APIMS

C. Advice and Tips

- N/A

3.2 – Record Keeping System and Requirements

A. Narrative

The Base Air Program Manager ensures the quality of the compliance data being gathered to support Air Quality compliance and reporting.

Using APIMS or some other information management system, establish a method for collecting, tracking and monitoring data (records) used to comply with requirements and thresholds established in the permit. In coming up with an effective recordkeeping system, keep in mind that permitting authorities typically prefer, or even require, that records be provided to state/federal compliance inspectors upon request. Accordingly, it is best to devise a recordkeeping system in which records associated with a permit can be accessed in short order.

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. N/A

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. APIMS

C. Advice and Tips

- N/A

3.3 - Inspections

A. Narrative

Enforcement Vulnerability Assessment outlines the required steps of the Base Air Program Manager in order to stay in compliance with permits. The assessment serves a record to demonstrate that base is staying in compliance. Additionally, the assessment monitors the provisions and steps put in place to stay in compliance and enable record keeping. The assessment includes:

- Tracking and recording compliance
- Comparing to other assessments within a particular state
- Reading local regulations
- Responding to MAJCOM requests
- Interviewing state regulators and air program

The Air Force team conducting the assessment compares the result to recommendations to determine the effectiveness of the ECAMP assessment.

For additional information, see the ESOHCAMP Playbook.

There are permit requirements and regulatory requirements. There are checklists to ensure compliance:

- Operator – Reviews the checklists daily, weekly or monthly
- Unit Environmental Coordinator (UEC) – Checks that the operator completes the checklists
- Oversight – Environmental manager conducts a statistical analysis of 95% confidence that there is compliance with a permit (this step depends on the size of the facility)

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. N/A

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. APIMS

C. Advice and Tips

- N/A

3.4 – Prepare for External Inspection

A. Narrative

It is important to build a strong working relationship with the regulatory agency and the regulatory compliance inspector. Understanding what a regulatory compliance inspector may be looking for and being prepared to demonstrate compliance are key success factors in planning for an external inspection. Also being familiar with checklists, operational requests, and regulations are important as well. Once the regulatory compliance inspector has arrived, arrange for an escort, conduct an orientation in a neutral location such as a conference room, and minimize access to the central record reporting system (5 years). Some additional action items below are key success factors in external inspections:

- Utilize the EPA checklist

- Be prepared to make immediate fixes
- Schedule an outbrief with commander
- Arrange to obtain a copy of the inspection report (State dependent)
- Arrange to create an after action report to UECS
- Ensure prior inspection results were fixed
- Review previous external inspection records

The Clean Air Act allows the Environmental Protection Agency EPA or its authorized representatives to enter the premises of facilities subject to any provision of the Act. The EPA has authority to inspect monitoring equipment, copy records, analyze, and sample process emissions to determine if the facility is violating any provision of the permit, the SIP or the Act.

In addition to inspections, EPA often sends Section 114 letters under 114(a)(1) of the CAA. These letters require the regulated owner to establish and maintain records, make reports, or provide information to determine whether the owner or operation is in violation of the Act.

Congress has moved towards criminalizing conduct that knowingly violates the CAA. Almost every knowing violation is now elevated to felony status. The Amendments to the CAA make clear that senior officials, as well as environmental managers, may be individually held criminally and/or civilly liable for knowing or willful violations of the CAA.

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. N/A

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. N/A

C. Advice and Tips

- N/A

4.0 Management Review

4.1 – Evaluate Performance Measures

A. Narrative

Process 4.1 – Evaluate Performance Measures

Estimated Completion Time: N/A

Base Air Program Managers evaluate performance measures to ensure strategic coordination across the Air Force (AF), establish specific Air Quality goals, and to evaluate performance against specific Air Quality goals outlined in the developed Air Quality strategic plan. Using the performance data results, the Base Air Program Manager utilizes the Department of Defense (DoD) Metrics to conduct a trend analysis to determine the overall performance and identify necessary areas of improvement.

The Base Air Program Manager should also develop installation level metrics. These metrics will be valuable tools in the Review Data process to see exactly where the program is in respect to the base's goals. The Base Air Program Manager will develop these metrics to measure specific goals that have been established during the planning stage. The metrics should include, but are not limited to, program related measures such as permit limits, funds obligation goals, SIP requirements, ESOHCAMP findings, and enforcement actions.

[Entry from Process 1.2 Establish Strategic Plan.](#)

[Entry from Process 1.3 Budgeting.](#)

Step 4.1.1 – Collect Performance Data

Role: Source Manager

Estimated Completion Time: N/A

Collect all required data on performance whether it be metering systems, monthly operating reports, fuel consumption reports or other data collection method that have been established for you specific needs. This data may come from reports from the air source managers or from other sources that have been defined in the Implementation and Operations section of the playbook under Emissions Monitoring, Sampling Analysis and Monitoring, Compliance Assurance Monitoring, Continuous Emissions Monitoring and Record Keeping and Reporting.

[Proceed to Step 4.1.2.](#)

Step 4.1.2 – Utilize Installation Level Metrics

Role: Base Air Program Manager

Estimated Completion Time: N/A

Compare current performance data against installation level metrics mentioned above. Review the data that has been collected and establish usable charts or other media to use in comparing the data against the established installation level metrics.

[Proceed to Step 4.1.3.](#)

Step 4.1.3 – Examine Results and Conduct Trend Analysis

Role: Base Air Program Manager

Estimated Completion Time: N/A

Examine results from the comparison of performance results. With the results, identify and target necessary areas for improvement. Utilize collected performance data to compare against baseline from past performance to see if there was a reduction in air pollutants. Then determine the quantity of reduction. Additionally, using MS Excel, MS Access, MS Project, or Primavera P3, utilize the collected performance data to forecast future performance.

[Proceed to Step 4.1.4.](#)

Step 4.1.4 – Compare to Goals and Conduct Final Analysis

Role: Base Air Program Manager

Estimated Completion Time: N/A

Utilize the metric and compare current performance to goals outlined in the strategic plan. If goals are being achieved, you are complete. If goals are not achieved continue to review the data and establish a plan to achieve the goal by performing a trend analysis. Communicate the trends to the source managers and together with the source manager, develop appropriate actions to ways to get the program back on track. Communicate the actions to your supervision.

[Proceed to Step 4.1.5.](#)

Step 4.1.5 – Amend Strategic Plan

Role: Base Air Program Manager

Estimated Completion Time: N/A

Amend strategic plan by changing goals and/or objectives based on collected performance data and analysis.

[Proceed to Process 1.2 Establish Strategic Plan.](#)

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. Executive Order 13514
- b. Clean Air Act

3. Forms

- a. N/A

4. Documents

- a. AF Strategic Plan

5. File Directories

- a. N/A

6. Websites

- a. N/A

7. Systems

- a. Primavera P3

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Proceed to Strategic Plan Process• Proceed to Budgeting Process• Utilize Installation Level Metrics• Examine Results and Conduct Trend Analysis• Compare to Goals and Conduct Final Analysis• Amend Strategic Plan
Source Manager	<ul style="list-style-type: none">• Collect Performance Data

D. Advice and Tips

- N/A

4.2 – Perform Air Quality Review

A. Narrative

Process 4.2 – Perform Air Quality Review

Estimated Completion Time: N/A

In the Perform Air Quality Review Process, the Base Air Program Manager determines whether or not the facility is in compliance with relevant permit requirements. If the facility is not in compliance with the permit requirements, the Base Air Program Manager creates projects that will result in compliance and submits the projects as a Program Operation Memorandum (POM) data in the Automated Civil Engineering System – Project Management ACES-PM database for approval.

Step 4.2.1 – Review Data

Role: Base Air Program Manager

Estimated Completion Time: N/A

Examine data from existing records. This data originates from many sources that have been discussed other sections of the playbook. See Implantation and Operation Section, Emissions Monitoring and Recordkeeping and Reporting processes, NIA Playbook, EMS Playbook and Budgeting Playbook for more information on where this data comes from. Review and evaluate this data to determine if it meets the requirements of compliance.

[Proceed to Decision 4.2.2.](#)

[For additional information, see the Record Keeping and Reporting Process.](#)

Decision 4.2.2 – Meet the Requirements?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Utilize the reviewed data to determine if facility is in compliance with the permit requirements. If the facility is in compliance, then the process ends until the next review cycle. If the facility is not in compliance, then modify the process to meet the requirements.

If 'Yes', End.

[If 'No', proceed to Step 4.2.3.](#)

Step 4.2.3 – Modify the Process to Meet the Requirements

Role: Base Air Program Manager

Estimated Completion Time: N/A

Using trend analysis from the Evaluate Performance Measures to adjust or change the process to meet the requirements.

[Proceed to Decision 4.2.4.](#)

Decision 4.2.4 – Adjust Requirements?

Role: Base Air Program Manager

Estimated Completion Time: N/A

Determine whether the permit or SIP requirement can be adjusted for the facility or if the source of emission has to be reduced to be in compliance.

[If 'Yes', proceed to Step 4.2.5.](#)

[If 'No', proceed to Step 4.2.6.](#)

Step 4.2.5 – Adjust Requirements

Role: Base Air Program Manager

Estimated Completion Time: N/A

Adjust the requirements of the permits and SIPs or look for exemptions in the laws and regulations for the out of compliance condition. Permits and SIP action will require the modification or amending to existing permit or SIP.

[Proceed to 1.10.2 Modify/Renew Existing Permit Process.](#)

Step 4.2.6 – Identify Controls and Create Projects to Reduce Emissions

Role: Base Air Program Manager

Estimated Completion Time: N/A

If modification of the permits or SIPs cannot be accomplished then look for other methods to bring back into compliance. Control devices are a good area to target to reduce emissions. Identify controls and create projects that will reduce emissions on base utilizing the Budgeting Playbook.

[Proceed to Step 4.2.7.](#)

Step 4.2.7 – Input Data into ACES PM

Role: Base Air Program Manager

Estimated Completion Time: N/A

Insert Program Operation Memorandum (POM) data into ACES PM.

[Proceed to AMP Process.](#)

[Proceed to 1.3 Budgeting Process.](#)

[Proceed to 1.12 Contract Management Process.](#)

B. References and Resources

1. **Templates**
 - a. N/A
2. **Policies and Regulations**
 - a. AFI 32-7040
3. **Forms**
 - a. N/A
4. **Documents**
 - a. N/A
5. **File Directories**
 - a. N/A
6. **Websites**
 - a. N/A
7. **Systems**
 - a. ACES PM

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Air Program Manager	<ul style="list-style-type: none">• Review Data• Determine if Data Meet Requirements• Modify Process to Meet Requirements• Determine if Adjustment of Requirements are Needed?• Adjust Requirements• Link to Modify/Renew Existing Permit Process• Identify Controls and Create Projects to Reduce Emissions• Input POM Data into ACES-PM• Proceed to AMP Process• Proceed to Budgeting Process• Proceed to Contract Management Process

D. Advice and Tips

- N/A

4.3 – Respond to Data Calls

A. Narrative

Process 4.3 – Respond to Data Calls

Estimated Completion Time: N/A

Various agencies, such as the Department of Defense (DOD), the Environmental Protection Agency (EPA) or local institutions, conduct data calls contacting bases or MAJCOM to collect specific information regarding emissions. Data calls occur semiannually and quarterly. Additionally, agencies and local institutions conduct ad hoc data calls which occur when local agencies or other entities contact facilities requesting emissions data at random.

The Environmental Quality Data Call is input into the Air Force Environmental Internet Data Call System (AFEIDCS) twice a year by bases (and GOCO operators). It covers data for the first two quarters of the fiscal year (October-March) and then the second two quarters (April-September). The AF Center for Engineering and the Environment (AFCEE/TDNC) is the focal point for collecting and consolidating this data.

The data may be used to conduct program management reviews, support the Program Objective Memorandum (POM), answer Congressional and senior leadership inquiries, submit AF input to the Defense Environmental Program Annual Report to Congress (DEP ARC), brief the EQ program to ADUSD (ESOH) and respond to miscellaneous data calls received throughout the year. Data is also used for asset management and conducting natural infrastructure inventories.

Agencies such as the EPA or local institutions, conduct data calls contacting bases or MAJCOM to collect specific information regarding emissions. The data calls can occur at any time throughout the year. Note: bases are not allowed to voluntarily report their GHG emissions.

Step 4.3.1 – Contact Appropriate Resource**Role: Outside Agency*****Estimated Completion Time: N/A***

An outside agency such as the EPA, state or local authority, contacts MAJCOM or a specific base with a data call. The entity requests specific information regarding emissions.

[Proceed to Step 4.3.2.](#)

[Proceed to Step 4.3.3.](#)

Step 4.3.2 – Receive Data Call**Role: Base Air Program Manager*****Estimated Completion Time: N/A***

Receive data call from the outside agency.

[Proceed to Step 4.3.4.](#)

Step 4.3.3 – Receive Data Call**Role: MAJCOM*****Estimated Completion Time: N/A***

Receive data call from the outside agency.

[Proceed to Step 4.3.7.](#)

Step 4.3.4 – Notify MAJCOM of Data Call

Role: Base Air Program Manager
Estimated Completion Time: N/A

Notify MAJCOM that a data call was received from an outside agency.

[Proceed to Decision 4.3.5.](#)

Decision 4.3.5 – Base Level Legal Counsel?

Role: Base Air Program Manager
Estimated Completion Time: N/A

Determine if there is a Base Level Legal Counsel at the base to obtain advice regarding the data call. Contact Base Level Legal Counsel if available. If not then consult with MAJCOM for advice.

[If 'Yes', proceed to Step 4.3.9.](#)

[If 'No', proceed to Step 4.3.6.](#)

Step 4.3.6 – Consult MAJCOM for Legal Advice

Role: Base Air Program Manager
Estimated Completion Time: N/A

If there is not a Base Level Legal Counsel, then contact MAJCOM for legal advice.

[Proceed to Step 4.3.7.](#)

Step 4.3.7 – Contact AFCEE for Legal Advice

Role: MAJCOM
Estimated Completion Time: N/A

Contact AFCEE for legal advice regarding data call.

[Proceed to Step 4.3.8.](#)

Step 4.3.8 – Provide Legal Advice

Role: AFCEE Legal Authority
Estimated Completion Time: N/A

Provide legal advice to the MAJCOM regarding response to the data call.

[Proceed to Step 4.3.11.](#)

Step 4.3.9 – Contact Base Level Legal Counsel

Role: Base Air Program Manager
Estimated Completion Time: N/A

If there is a Base Level Legal Counsel, contact to receive advice as how to respond to the data call.

[Proceed to Step 4.3.10.](#)

Step 4.3.10 – Provide Legal Advice

Role: Base Level Legal Counsel
Estimated Completion Time: N/A

Provide legal advice to Base Air Program Manager regarding a response to the data call.

[Proceed to Step 4.3.13.](#)

Step 11 – Receive Legal Advice
Role: MAJCOM
Estimated Completion Time: N/A

Receive legal advice and guidance from AFCEE Legal Authority.

[Proceed to Decision 4.3.12.](#)

Decision 4.3.12 – Information Relevant to a Specific Base?
Role: MAJCOM
Estimated Completion Time: N/A

Determine if the advice received should be communicated to a specific base or should remain at the MAJCOM level. If the information is relevant to a specific base than communicate legal advice and guidance to the relevant bases(s). If not, then the outside agency acts according to the legal advice provided by the Base Level Legal Counsel.

[If 'Yes', proceed to Step 4.3.14](#)

[If 'No', proceed to Step 4.3.15.](#)

Step 4.3.13 – Receive and Act upon it
Role: Base Air Program Manager
Estimated Completion Time: N/A

Act according to the legal advice provided by legal counsel.

End.

Step 4.3.14 – Communicate Legal Advice
Role: MAJCOM
Estimated Completion Time: N/A

Communicate legal advice and guidance to the relevant base(s).

[Proceed to Step 4.3.13.](#)

Step 4.3.15 – Act on Legal Advice
Role: Outside Agency
Estimated Completion Time: N/A

Act according to the legal advice provided by Base Level Legal Counsel.

End.

B. References and Resources

1. **Templates**
 - a. N/A
2. **Policies and Regulations**
 - a. N/A
3. **Forms**
 - a. N/A
4. **Documents**
 - a. N/A
5. **File Directories**
 - a. N/A
6. **Websites**
 - a. N/A
7. **Systems**
 - a. ESOHMIS

C. Roles and Responsibilities

ROLES	RESPONSIBILITIES
Base Level Legal Counsel	<ul style="list-style-type: none">• Provide Legal Advice
Base Air Program Manager	<ul style="list-style-type: none">• Receive Data Call• Notify MAJCOM of Data Call• Base Level Legal Counsel?• Contact Base Level Legal Counsel• Consult MAJCOM for Legal Advice• Receive Advice and Act Upon It
MAJCOM	<ul style="list-style-type: none">• Receive Data Call• Contact AFCEE for Legal Advice• Receive Legal Advice• Information Relevant to a Specific Base• Communicate Legal Advice• Act on Legal Advice
AFCEE Legal Authority	<ul style="list-style-type: none">• Provide Legal Advice
Outside Agency	<ul style="list-style-type: none">• Contact Appropriate Resource

D. Advice and Tips

- N/A

4.4 – Prepare Action Items

H. Narrative

Process 4.4 – Prepare Action Items Process

Estimated Completion Time: 1 day

At year end the Base Air Program Manager evaluates achievement of the strategic plan and Environment Management System (EMS) goals and objectives, the budget plan, performance measures, and resolution of compliance issues (OEAs and ESOHCAMP finding) for the fiscal year. An action item is prepared for each performance gap and open issue and inserted into the strategic plan or EMS for resolution in the following fiscal year. This process is performed at the installation, MAJCOM, and headquarter (HQ) levels.

I. References and Resources

15. Templates

- a. N/A

16. Policies and Regulations

- a. N/A

17. Forms

- a. N/A

18. Documents

- a. N/A

19. File Directories

- a. N/A

20. Websites

- a. N/A

21. Systems

- b. N/A

J. Advice and Tips

- N/A

5.0 Training

A. Narrative

There are several types of training that include training for Air Managers and Source Managers. It is important to take training specific to your role that may include expert proficiency, operational process knowledge, or general compliance awareness.

Air Quality Managers should contact the MAJCOM Air Program Manager for recommendations for appropriate courses to take.

1. Trinity Consultants
 - a. Advanced Air Permitting
 - i. NSR/PSD Compliance Workshop
 - ii. Managing Title V Permits
 - iii. Advanced NSR Permits
 - b. Industry Specific
 - i. Compliance Workshop for ODS
 - ii. Compliance Management for Fugitive Emission
 - c. Technical Courses
 - i. Fundamentals of Air Dispersion Modeling
 - ii. Stack Testing Workshop
 - iii. Managing Continuous Emission Monitoring Systems
 - iv. Practical Air Dispersion Modeling Workshop
 - v. Emission Reduction Technology and Compliance Management
 - vi. Dispersion Modeling for Mangers Planning and Review
 - d. State Specific Courses
 - i. Air Quality Permitting Programs
 - ii. Air Quality Modeling Program
 - iii. Title V Permitting Program
 - iv. Air Quality Permitting in Non-Attainment Areas
 - v. Environmental Reporting Requirements
 - vi. Greenhouse Gas Workshop
 - e. Aarcher Institute of Environmental Training
 - i. Greenhouse Gas Emission Inventories for Federal Facilities
 - ii. Clean Air Compliance Bootcamp: Advanced Training for Air Professionals
2. ABS Consulting
 - a. Clean Air Compliance Institute*
 - b. AFIT offers this course so the AF wont fund
3. Air and Waste Management
 - a. Profession Development Courses – contains catalogue of courses
4. EPD training Course
5. APIMS training course
6. Air Force Environmental Training Symposium
7. EPA – Air Pollution Training Institute (APTI)
 - a. Cleaning the Air
 - b. Uniform Air Quality Training
 - c. Air Issues in Storage Tanks
 - d. Advance New Source Review/Prevention of Significant Deterioration
 - e. Control of NOx Emissions
 - f. Control of Particulate Emissions (PM)
 - g. Continuous Emissions Monitoring
 - h. VOC Control Devices
 - i. Stationary Gas Turbines
 - j. Source Sampling and Oversight
 - k. Stationary Reciprocating Engines

- l. Industrial Boilers
 - m. Baghouses
 - n. Principles and Practices of Air Pollution Control
- 8. State/local training courses and workshops

B. References and Resources

1. Templates

- a. N/A

2. Policies and Regulations

- a. N/A

3. Forms

- a. N/A

4. Documents

- a. N/A

5. File Directories

- a. N/A

6. Websites

- a. Archer Institute Website
- b. ABS Consulting Website
- c. Air Pollution Training Institute Website
- d. AWMA Website (Go to Environmental Education/Professional Development)
- e. ESOH Symposium 2010 Website
- f. Trinity Consultants Website
- g. AFIT Website

7. Systems

- a. N/A

C. Advice and Tips

- N/A