



## Compliance | Appendix T: Air Quality

The Department of Defense (DoD) is committed to achieving the highest degree of air quality compliance to protect public health, the environment, and property from harmful pollutants while sustaining the military mission. DoD uses the Clean Air Act (CAA) as the primary statute that establishes regulations to improve the nation's air quality and regulates the activities of federal agencies to ensure that state and federal air pollution control standards are met. Major CAA programs include: the National Emission Standards for hazardous air pollutants (HAPs), the CAA Title V Operating Permit Program, New Source Review, State Implementation Plans, and vehicle inspection and maintenance programs.

Under the CAA, the U.S. Environmental Protection Agency (EPA) sets National Ambient Air Quality Standards (NAAQS), which define primary standards for air regulations on six criteria pollutants including carbon monoxide (CO), lead (Pb), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), ozone (O<sub>3</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). PM<sub>10</sub> are particles less than 10 micrometers in diameter, while PM<sub>2.5</sub> are particles less than 2.5 micrometers in diameter. PM<sub>10</sub> pose a health concern because they can accumulate in the respiratory system after inhalation. PM<sub>2.5</sub> are referred to as fine particles and pose the largest health

risks because they can lodge deeply into the lungs. Criteria pollutants are generated in large quantities by motor vehicles and industrial operations powered by fossil fuels. Ozone is not typically emitted, but occurs as a result of a chemical reaction between NO<sub>x</sub> and volatile organic compounds (VOCs). For this reason, DoD reports VOCs and NO<sub>x</sub> with the criteria air pollutants, instead of ozone, even though NAAQS for VOCs do not exist.

HAPs regulated under the CAA present a threat to human health and the environment, and exist as particulate matter or vapors. Examples of HAPs include benzene, which is found in gasoline; perchloroethylene, which is emitted from some dry-cleaning facilities; and methylene chloride, which is used as a solvent and paint-stripper. Lead, controlled as both a HAP and a criteria pollutant, is the only chemical on both lists.

## DoD

DoD effectively manages its air quality to provide its personnel and their families with clean air. Figure T-1 provides an overview of the Components' air emissions in Calendar Year (CY) 2006. The data presented include emissions of VOCs, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, CO, lead, and HAPs. In CY2006, DoD installations reported that 1,700.22 tons of HAPs were emitted into the atmosphere, 728.3 tons less than the previous year.

## Army

Many of the Army's activities are impacted by the CAA requirements, including maintenance, rework, and inspection of vehicles; operation of new and existing boilers and incinerators; waste disposal; manufacturing; some training activities; air emissions monitoring; decreased use of ozone-depleting substances (ODSs); and the acquisition of alternative fuel vehicles. Army leadership manages HAPs, ODSs, and risk management planning, and ensures compliance with permit conditions, air emissions inventories, and on-site inspections. The Army works to assist installations and support compliance with air quality regulations by reviewing CAA rule-making, preparing impact analyses and guidance documents, performing compliance assessments, and staying abreast of air quality initiatives. Much of this work is performed through its subordinate commands such as the Installation Management Command

and Army Materiel Command; various technical organizations; the National Guard Bureau; the US Army Reserve; and the DoD Regional Environmental Offices.

## Navy

In order to accomplish its mission, the Navy must carry out daily land, sea, and air operations. Accordingly, the Navy is committed to operating in a manner compatible with the environment by complying with all applicable federal, state, and local environmental laws and regulations to protect human health and the environment. These compliance measures are necessary to sustain Naval operations and maintain a high level of mission readiness. The Navy is the DoD Executive Agent for CAA matters and, in that capacity, leads the DoD CAA Steering Committee. This committee shares information, directs policy and guidance, and monitors activities specifically related to the CAA.

## Marine Corps

As an amphibious force with close air support, the Marine Corps has a unique operational relationship with the environment. The Marine Corps is committed to attaining and sustaining compliance with all applicable air management regulations and considers such compliance vital to the successful performance of its mission. Most Marine Corps

emission sources are regulated under the NAAQS program. Some of the common emission sources at Marine Corps installations, such as painting or ground equipment coating operations, are not identified as source categories under the CAA.

## Air Force

The commitment of the Air Force Air Quality Program is to protect public health, the Air Force workforce, and the environment from harmful pollutants while sustaining its mission. This essential task not only involves reporting air pollutants from base sources, but implementing innovative technologies to prevent or reduce emissions that impact the air. Common sources of air pollution at Air Force installations include boilers, incinerators, fuel storage and transportation, parts cleaning, surface coating operations, and aircraft operations. The extent to which the CAA requirements affect the operation of an Air Force facility depends on the location of the installation and the types of industrial operations.

## DLA

The Defense Logistics Agency (DLA) is committed to functioning in a manner that safeguards human health and the environment, while providing a safe working environment for employees and ensuring compliance with applicable laws, regulations, and policies.

Figure T-1 CY2006 Air Emissions (tons/year)

Component	Criteria Air Pollutants								
	HAPs	VOCs	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	CO	Lead	
Army	768.07	6,533.72	4,789.00	11,513.65	563.52	8,191.13	3,700.22	75.69	
Navy	198.88	1,230.49	2,168.64	675.50	146.17	2,015.95	1,148.51	2.09	
Marine Corps	89.46	281.37	836.33	80.84	49.46	1,189.60	225.23	0.30	
Air Force	643.39	2,704.57	8,367.08	1,546.90	98.32	3,657.80	4,125.94	1.10	
DLA	0.42	5.31	66.67	7.30	4.47	129.57	11.25	0.01	
<b>Total</b>	<b>1,700.22</b>	<b>10,755.46</b>	<b>16,227.72</b>	<b>13,824.19</b>	<b>861.94</b>	<b>15,184.05</b>	<b>9,211.15</b>	<b>79.19</b>	