

EPA Updates Air Emission Factors for Ordnance

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The EPA released final emission factors for the following ordnance categories: Fuses [Fuzes] and Primers; Mines and Smoke Pots; Grenades; Projectiles, Canisters and Charges; Large Cartridges (>75mm); and Small Arms. The air emission factors for ordnance are documented in Chapter 15 (Ordnance Detonation) of EPA's AP-42 (5th edition, Volume I). EPA's effort to develop and capture air emissions factors for ordnance has been a work in progress which started several years back when the Army first developed emission factors for nine ordnance items through testing conducted at Dugway Proving Grounds (a.k.a. bang box tests) and the Army Environmental Center. The ordnance for which emission factors were first developed included a 155mm illumination round, green and white star signal flares, and simulators (flash artillery, booby trap, and hand grenade).

Since then, the EPA has been developing and documenting emission factors for other ordnance. The EPA plans to continue assessing emissions for specific ordnance types and will be adding to the AP-42 volume over the next several years. The current status of AP-42 emission factors for ordnance can be accessed and downloaded from the EPA Website

<http://www.epa.gov/ttn/chief/ap42/ch15/index.html>

Background - An emission factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. They are used to estimate emissions from all major types of air pollution including point, area, and mobile sources. The passage of the Clean Air Act Amendments Of 1990 (CAAA) and the Emergency Planning And Community Right-To-Know Act (EPCRA) of 1986 increased the need for both criteria and hazardous air pollutant (HAP) emission factors and inventories. Emissions factors are developed, managed and tracked by the EPA's Emission Factor and Inventory Group (EFIG). The Compilation of Air Pollutant Emission Factors (known as the AP-42) is the principal means by which the EFIG documents emission factors. Eleven sections have been identified under the Chapter 15 (Ordnance Detonation) of AP-42 (5th edition, Volume I) for ordnance detonations including:

- small cartridges (
- medium cartridges (30-75mm)
- large cartridges (>75mm)
- Projectiles, canisters and charges
- Grenades
- Rockets, rocket motors, and igniters
- Mines and smoke pots
- Signals and simulatrs
- Blasting caps, demolition charges, and detonators
- Fuses and primers
- Guided missiles