

# 2008 National Emissions Inventory

## Emissions Inventory System Implementation Plan

### Section 12 Reporting Instructions for Airports, Locomotives, and Commercial Marine Vessels

**Revised**

Original: December 23, 2008  
Revised: August 3, 2009

# Change Tracking Log

Date of Revision	Description
August 3, 2009	<ul style="list-style-type: none"><li>Updated the Aircraft Engine Emissions SCCs in Figure 12-1 on page 12-3.</li></ul>

**Table of Contents**

**Page**

12.1 Airports .....

12.1.1 Airport Emissions Reported as Point Sources .....

12.2 Locomotive Emissions.....

12.3 Commercial Marine Vessel Emissions .....

12-1

12-2

12-4

12-6

**List of Figures**

	<b><u>Page</u></b>
Figure 12-1: Typical Emission Unit Types, SCCs, and Emission Release Point Types for Airports.....	12-3
Figure 12-2: Typical Information Required for Submitting Locomotive Emissions .....	12-5
Figure 12-3: Typical Information Required for Submitting CMV Emissions.....	12-7

## Section 12

### Reporting Instructions for Airports, Locomotives, and Commercial Marine Vessels

This section provides supplemental reporting instructions for airports, locomotives, and commercial marine vessels. These sectors:

- May involve emissions from both traditional point and nonpoint/nonroad data categories;
- Benefit from clarification as to the correct data category; or
- Reflect a significant change in reporting practices from NIF 3.0.

The emissions for these sectors are reported to the EIS using instructions for one or more of the EIS data categories. This section will assist you in determining the correct reporting instructions to use and will explain how the peculiarities of these sectors should be handled within those EIS data categories. The complete details for the EIS data categories are shown in the following sections of the NEIP:

- Section 6, "Reporting Instructions for Facility Inventory"
- Section 7, "Reporting Instructions for Point Emissions"
- Section 8, "Reporting Instructions for Nonpoint Emissions"

#### 12.1 Airports

EPA has identified airports that account for the majority of aircraft emissions. EPA has placed these airports and their location data in the EIS Facility Inventory, along with their related processes (e.g., aircraft engines, auxiliary power units, and ground support equipment). You are asked to review EPA's activity and emissions data and provide any superior local data if available.

EPA will provide activity (landing and takeoff data (LTO)) and estimated aircraft-related emissions at airports (aircraft exhaust, ground support equipment, and auxiliary power units) for the airports in the facility inventory. Therefore, you need only submit where you have superior estimates. Unlike previous inventory cycles, EPA will not accept Tribal or County-level aggregated airport emissions as a nonpoint or nonroad category for aircraft engines, auxiliary power units, or ground support equipment. All other emissions related to aircraft that have traditionally been reported as nonpoint sectors (e.g., aviation gas distribution) will continue to be accepted only as Tribal- or County-level aggregated emissions.

Due to the need maintain in the inventory all emissions of lead from the use of leaded aviation gasoline, EPA plans to develop and include nationwide lead emissions from in-flight aircraft. These emissions will be provided as nonpoint emissions. You are not responsible for submitting this data, and EPA will not accept it should you report it.

#### Definition

In-flight emissions are defined as emissions that occur outside the landing and take-off cycle, generally above 3,000 feet.

Emissions from onroad vehicle traffic to and from an airport, and at an airport, will be calculated using EPA's MOBILE model and accounted for in the County-level totals of the mobile source category. Onroad emissions using EDMS will not be accepted as part of an airport's point source emissions.

Similarly, emissions from nonroad equipment must not be double counted. All emissions from airport ground support equipment must be reported at the airports. Both the Emissions and Dispersion Modeling System (EDMS) and the NONROAD models can calculate emissions from airport ground support equipment. You may use either model to calculate these emissions, but the EDMS option is preferred because it is considered to be more accurate. Also, EDMS will provide airport-specific emissions. If you use the NONROAD model for ground support equipment emissions, you will have to apportion the County-level emissions outputs to the specific airport point facilities in the EIS Facility Inventory. EPA will not accept County-level emissions submittals for ground support equipment as part of your nonroad data category submittal.

### **12.1.1 Airport Emissions Reported as Point Sources**

You have the ability and option to review and update the facility sites preloaded by EPA in the EIS Facility Inventory prior to preparing and submitting emissions data. You may view your facility inventory through the EIS Gateway. You will be able to modify the information for the facility site, and add or revise emission units, emission processes, and emission release points at the airports in the facility inventory. For more information on adding or revising emission units, processes, and release points, or for reporting point emissions, see the detailed instructions in Section 6, "Reporting Instructions for Facility Inventory" and Section 7, "Reporting Instructions for Point Emissions." Figure 12-1 provides the reporting codes for units, processes, and release points that should be used at a typical airport. You may submit different codes, if necessary, to represent accurately your particular airport.

Some airport locations may have more than one facility in the facility inventory depending on how S/L/Ts define their facilities. As long as emissions are not duplicated, this is permissible. For example, one facility may contain aircraft engine, auxiliary power unit, and ground support equipment occurring on the runways, while a second facility may be used for reporting the permitted boilers or other traditional point source processes. A third facility might be used for reporting emissions that occur at a painting or maintenance hangar that is not the responsibility of the airport authority. You will not be able to add additional facilities for aircraft engines, auxiliary power units, or ground support equipment to the facility inventory directly. Any airports included in your batch submissions that are not already included in the facility inventory will be rejected based on SCCs submitted for the emissions processes. If you determine that a significant airport is missing from your facility inventory, was included in error, or is a duplicate of another facility, you must submit an EIS support request for EPA to add or remove an airport. For more information on requesting new data from EPA see the section of the EIS Users Manual entitled "How Do I Submit a Support Request?".

Prior to the start of the submission period, EPA will post the activity data that it will use in EDMS Version 5.1 for emissions calculations. EPA will use that data, and any submitted updates, to calculate emissions for all airports. The resulting emissions, along with the associated landing and takeoff (LTO) cycle activity data, will be stored in the EIS. You will have another opportunity during the submission period to view these emissions through the EIS

Gateway, and you are encouraged to submit your own local airport activity data and/or emissions data if they are different than EPA's. At the close of the submission period EPA may recalculate emissions for all airports using the updated activity data received during the submission period.

**Aircraft LTO activity data.** EPA prefers that you submit only activity data. However, you may submit both activity and emissions data. In either case, a separate emission process with a unique emission process identifier and Aircraft Engine Type Code should be submitted for each aircraft model and engine make and model operating at an airport. This will allow you to provide the separate LTO activity data for each aircraft and engine combination that EDMS requires. You will likely use the same SCC for several of these aircraft and engine combinations, but each combination that EDMS requires should have its own emission process and identifier.

#### Reporting LTO Data

To report LTO data for each emission process you will report the associated SCC and the more detailed AircraftEngineTypeCode used for EDMS input. Then, for the associated Reporting Period, you will report the number of LTOs as the CalculationParameterValue.

EPA has provided its default engine assumptions and SCC assumptions for each aircraft-engine combination in the Aircraft Engine Type Code table. However, an agency may know that a given aircraft-engine combination belongs to a different SCC because of knowledge of the source (e.g., Air Force One maybe considered a military aircraft even though the aircraft-engine combination is usually considered commercial). In that case, the agency may assign a different SCC than EPA's default assumption.

**Figure 12-1**  
**Typical Emission Unit Types, SCCs, and Emission Release Point**  
**Types for Airports**

Emission Unit Type	Recommended Emission Unit Type Code	Recommended SCCs	Recommended Release Point Type
Aircraft Engine Emissions	300 - Open Air Fugitive	2275001000 - Military Aircraft	1 - Fugitive
		2275020000 - Commercial Aircraft	
		2275050011 - General Aviation, Piston	
		2275050012 - General Aviation, Turbine	
		2275060011 - Air Taxi, Piston	
		2275060012 - Air Taxi, Turbine	
Auxiliary Power Units	300 - Open Air Fugitive	2275070000 - Aircraft Auxiliary Power Units	1 - Fugitive

<b>Emission Unit Type</b>	<b>Recommended Emission Unit Type Code</b>	<b>Recommended SCCs</b>	<b>Recommended Release Point Type</b>
Ground Support Equipment	300 - Open Air Fugitive	2260008005 - Airport GSE, Gasoline, 2-Stroke	1 - Fugitive
		2265008005 - Airport GSE, Gasoline, 4-Stroke	
		2267008005 - Airport GSE, LPG	
		2268008005 - Airport GSE, CNG	
		2270008005 - Airport GSE, Diesel	

**Emission units.** You should add to the facility inventory record additional emission units needed to accurately reflect all sources of emissions at your airport. For example, you may need to add boilers used for heating, cooling, and other operations. However, you may choose to account for these more typical point source category operations as a separate facility, depending upon your agency's definition of a facility. Figure 12-1 lists typical emission unit types found at airports for just the aircraft related processes.

#### **Important Process Note**

Only ten digit SCCs will be accepted for aircraft exhaust emissions beginning in 2008. To determine the acceptable SCCs for airports, see Appendix 6, "EIS Code Tables."

#### **Emission release points.**

The release point type code for most airport emissions will be 'Fugitive.' You should use this release point type code for airport emissions that cannot be associated with a specific release point, such as emissions from aircraft exhaust or from ground support equipment. You may submit more than

one runway as a fugitive release point and apportion overall aircraft-related process emissions to specific runways. You may also submit release point types that identify specific stacks or vents associated with boilers or similar emission units at your airport. You are required to report all release point parameters for stack release points, and encouraged to report parameters for fugitive release points, including the geographic coordinates and release point dimensions.

## **12.2 Locomotive Emissions**

Underway locomotive emissions should be reported using the nonpoint category reporting instructions. For more information, see Section 8, "Reporting Instructions for Nonpoint Emissions."

If you submit emissions for underway locomotives, you are required to submit both activity and emissions data. This is to ensure that submitted data are correctly reconciled with the national emissions estimates, and that an integrated inventory can be developed across all pollutants. If you submit the rail yard as a point source, activity data is encouraged but not required by the point source reporting rules. For more details on point source reporting, see Section 6, "Reporting Instructions for Facility Inventory" and Section 7, "Reporting Instructions for Point Emissions."



You may report the nonpoint location for underway locomotive emissions in one of two ways. You may not combine the methods - you may report only one method for a given County or Tribal area.

- **Emissions reported as County or Tribal area aggregates.** If you choose to report at the County or Tribal area, EPA will allocate the emissions to the individual railroad segments and rail yards within the County or Tribal area, as indicated in Appendix 12, "Railroads and CMV Allocation Methods."
- **Emissions reported for each railroad track line segments using EIS shape identifiers.** To use this method, you do *not* need to submit geospatial files, as these will be stored in the EIS shape library. You should submit only the appropriate shape file identifiers along with your emissions. The shape identifiers and descriptions can be obtained from the EIS shape library, which you can access through the EIS Gateway.

If you use this method, you must report emissions for all track line segment shape identifiers within the County or Tribal area. If you need to add or modify a railroad track line segment, you will need to contact EPA. For more information see the section of the EIS Users Manual entitled "How Do I Submit a Support Request?"

Regardless of the level of granularity you submit for the location, you will still need to report the other applicable nonpoint components, including emission process, reporting period, activity, and emissions, as described in Section 8, "Reporting Instructions for Nonpoint Emissions."

EPA anticipates that data necessary for S/L/Ts to submit locomotive emissions by using EIS shape identifiers will not be widely available, and expects that most emissions will be submitted as County or Tribal aggregates.

Although you may include emissions for rail yard and switch yards in the County or Tribal area aggregates, you are encouraged to report as point sources any rail yard and/or switch yard for which you know the location. See Section 6, "Reporting Instructions for Facility Inventory" for details on how to report a rail yard or switch yard as a point source.

**Figure 12-2**  
**Typical Information Required for Submitting Locomotive Emissions**

Location	Recommended SCCs	Recommended Reporting Period	Emissions
Submit either: -- County Code -- Tribal Code -- Railroad Track Shape ID	Underway Rail Traffic: 2285002006 2285002007 2285002008 2285002009  Rail Yards: 2285002010	Annual (required) Ozone Season (optional)	See Section 8, "Reporting Instructions for Nonpoint Emissions" for more information.

### 12.3 Commercial Marine Vessel Emissions

Commercial marine vessel (CMV) emissions should be reported using the nonpoint category reporting instructions. For more information, see Section 8, "Reporting Instructions for Nonpoint Emissions."

If you submit CMV emissions, you are required to submit both activity and emissions data. This is to ensure that submitted data are correctly reconciled with the national emissions estimates, and that an integrated inventory can be developed across all pollutants.

States that report CMV emissions from a shared inland waterway, such as a major river that forms a border between two States, should coordinate when reporting emissions. The coordination is necessary to ensure that both States do not report the total emissions for CMV traffic on the river; each state should claim half of the total waterway emissions.

You may report the nonpoint location for commercial marine emissions in one of two ways. You may not combine the methods - you may report only one method for a jurisdiction.

- **Emissions reported as County or Tribal area aggregates.** If you choose to report at the County or Tribal area, EPA will allocate the emissions to the waterway segments and ports within the County or Tribal area, as indicated in Appendix 12, "Railroads and CMV Allocation Methods."
- **Emissions reported for each waterway line segment or port polygons.** To use this method, you do *not* need to submit geospatial files, as these will be stored in the EIS shape library. You should submit only the appropriate shape file identifiers along with your emissions. The shape identifiers and descriptions can be obtained from the EIS shape library, which you can access through the EIS Gateway.

If you use this method, you must report all waterway line segment shape identifiers, or all port polygon shape identifiers, within County or Tribal area. If you need to add or modify a waterway line segment or port polygon, you will need to contact EPA. For more information see the section of the EIS Users Manual entitled "How Do I Submit a Support Request?"

EPA anticipates that data necessary for S/L/Ts to submit commercial marine vessel emissions by using EIS shape identifiers will not be widely available, and expects that most emissions will be submitted as County or Tribal aggregates.

Regardless of the level of granularity you submit for the location, you will still need to report the other applicable nonpoint components, including emission process, reporting period, activity, and emissions, as described in Section 8, "Reporting Instructions for Nonpoint Emissions."

#### Important Process Note

Do not report emissions from commercial marine vessels operating in Federal waters. Federal Waters are defined as generally beginning three miles from shore. However, some States extend their boundaries further than three miles.

**Figure 12-3**  
**Typical Information Required for Submitting CMV Emissions**

<b>Location</b>	<b>Recommended SCCs</b>	<b>Recommended Reporting Period</b>	<b>Emissions</b>
Submit either: -- County Code -- Tribal Code -- Waterway Shape IDs -- Port Shape IDs	Underway CMV Traffic: 2280002200 2280003200  Port: 2280002100 2280003100	Annual (required) Ozone Season (optional)	See Section 8, "Reporting Instructions for Nonpoint Emissions" for more information.