

## Introduction to Source Classification Codes and their Use for EIS Submissions

This document is a basic primer on what source classification codes (SCCs) are, and how they should be used for Emissions Inventory System (EIS) submissions. The goal of this document is to help the user understand a few basic concepts about the current SCC structure so that to make SCC searches easier and faster. The document has three sections. The first section is a brief introduction to SCCs. The second section describes the structure and shows examples of SCC applications. The final section provides answers to frequently asked questions. If you have any feedback regarding this document please send questions and suggested edits it to: [caer@epa.gov](mailto:caer@epa.gov).

### I. What is a Source Classification Code?

The U.S. EPA uses Source Classification Codes (SCCs) to classify different types of activities that generate emissions. Each SCC represents a unique source category-specific process or function that emits air pollutants. The SCCs are used as a primary identifying data element in EPA's WebFIRE (where SCCs are used to link emissions factors to an emission process), the National Emissions Inventory (NEI), and other EPA databases. The SCCs are also used by many regional, state, local and tribal agency emissions data systems. Examples of processes described by SCCs and some of the emissions they generate include:

- Burning fuel in a boiler produces oxides of nitrogen (NO<sub>x</sub>) and other criteria and hazardous air pollutants (HAP).
- An industrial process such as paint coating produces volatile organic compounds (VOC).
- Fires produce particulate matter (PM).

Sources in the SCC table are classified into the following five broad types: point, non-point, events, non-road and on-road, defined as follows:

**Point sources** include sources (usually large) that are located at a fixed, stationary location. Point sources in the NEI include large industrial facilities and electric power plants, airports, and smaller industrial, non-industrial and commercial facilities. The emissions potential of each facility determines whether that facility should be reported as a point source, according to emissions thresholds set in the Air Emissions Reporting Rule (AERR).

**Non-point sources** include sources that individually are too small in magnitude to report as point sources. Examples include residential heating, residential charcoal grilling, asphalt paving, and commercial and consumer solvent use.

**On-road sources** include on-road vehicles that use gasoline, diesel, and other fuels. On-road vehicles include light duty and heavy duty vehicles operating on roads, highway ramps, and during idling.

**Non-road sources** include off-road mobile sources that use gasoline, diesel, and other fuels. These source types include construction equipment, and lawn and garden equipment.

**Event sources** include fires that are reported in a day-specific format: wildfires and prescribed burns. Note that agricultural fires are included in non-point sources as an annual sum for a county.

The description of **mobile** and **biogenic** sources as well as how they relate to the broad types defined above will be described in the next section.

For more details see: <https://www.epa.gov/air-emissions-inventories/national-emissions-inventory>.

Table 1 shows the data categories and the current number of SCCs that exist for that category as well as the percentage they represent from the total. It shows that the majority of SCCs are from point sources. The number of SCCs changes as codes are added, modified, or retired.

**Table 1. General Summary of SCC Structure in Numerical Order**

<b>Data Category</b>	<b>Count</b>	<b>% of Total</b>
Point	7,587	83%
Non-point	1,228	13%
Non-road	214	2%
On-road	84	Almost 1%
Event	9	Less than 1%
<b>TOTAL</b>	<b>9,122</b>	

## II. SCC Structure and Breakdown

In general, SCCs use a hierarchical system in which the classification of the emissions process becomes increasingly more specific with each of the four levels (starting on the left of the code and moving from left to right). The first level of description provides the most general information about the emissions process. The fourth level is the most detailed and describes specifics about emissions process. Over time the evolution of emissions activity and regulations where SCCs were needed, as well as other factors, have led to a concurrent evolution of the SCCs structure. Some SCCs have been retired, others have been created, and others have been modified or converted. For example, some general SCCs that included a broad range of processes have been retired and new SCCs have been created to identify more specific emissions processes. Some SCCs may be extremely detailed in their representation of a process while others may not be as detailed. Some SCCs were created for specific regulations. SCCs *are not specific to a pollutant*, so that one SCC can describe a process that emits more than one pollutant. While there are some SCCs for processes related to specific industries, other SCCs can be independent of the economic activity that requires the process in question. For example: both an electricity generating facility and a pulp and paper manufacturer may use a combustion boiler to produce energy that has the same SCC. To learn what an individual SCC is for it is helpful to look at the data category as well as the descriptors in SCC levels 1 through 4.

Table 2 is a general summary (or broad roadmap) of the current SCC structure presented in numerical order, and shows broad source categories together with an approximate count of SCCs that fall in that category. Data categories are highlighted in different colors in the table to assist in finding them. Note that data categories *may not* be grouped in numerical order. For example, SCCs starting with “22” are mobile sources which include point, non-point, on-road and non-road sources. Also, SCCs starting with “28” are miscellaneous sources and include non-point and events.

SCCs are either 8 or 10 digits long. Most point source SCCs are 8 digits long, with exceptions to a handful of point SCCs that are also mobile sources (such as aircraft exhaust and airport ground support equipment). Non-point and events codes are 10 digits long.

Two level one categories of sources are worth noting here:

- **Mobile sources** include on-road and non-road emissions, and in addition also some point and non-point sources. For example, aircraft engine emissions (occurring during landing and takeoff operations at airports) and the ground support and power unit equipment are mobile sources that are included in point sources at airport locations. Locomotive emissions at rail yards are also included in point sources. Other locomotive emissions and commercial marine vessel emissions (both underway and port emissions) are mobile sources included in non-point sources.
- **Biogenic sources** (natural sources of emissions from vegetation) are considered non-point sources.

**Table 2. General Summary of SCC Structure in Numerical Order**

SCC level 1 (first 1 or 2 digits) Data Category: Level 1 Description	Approx. Count	Includes SCCs	Brief Description
<b>First digit: 1</b>	<b>Count: 237</b>		
<b>Point: External Combustion</b>	11	<b>105XXXZZ Space Heaters,</b> where XXX refers to whether the heaters are industrial or commercial/institutional, and the remaining ZZ digits are specific to the type of fuel used (level 4). <i>For example: SCC 10500105 is for external combustion (level 1), space heaters (level 2), industrial (level 3), distillate oil (level 4).</i>	A unit burning fuel to produce heat, including boilers and space heaters. Does not include Internal Combustion equipment, such as gas turbines and reciprocating engines, where the prime mover fluid doing the work is internal to the combustion chamber.
<b>Point: External Combustion Boilers</b> (8 digit SCC)	226	<b>101XXXZZ Combustion Boilers for Electricity Generation, 102XXXZZ Industrial Combustion Boilers, and 103XXXZZ Commercial/Institutional Combustion Boilers,</b> where the remaining digits are specific to a fuel and type of boiler (these details are provided in the SCC levels descriptors). Note that digits XXX are for level 3 and ZZ are for level 4. <i>For example: SCC 10100203 is an external combustion boiler (level 1), for electricity generation (level 2), that uses bituminous coal (level 3) and is a cyclone furnace (level 4).</i>	The prime mover fluid in a boiler (water/steam), whether it's used to turn a turbine-generator set or to provide process steam, is external to the combustion chamber.  It is important to note the type of fuel being used in the combustion process. This information can be found in the level 3 and 4 descriptors. Note that fuels used for combustion can include certain types of waste (e.g. agricultural bi-products, paper pellets and other solid waste). This is different than

			SCCs starting with 5 that apply to waste disposal. See “Waste Disposal” below.
<b>First digit: 2</b>	<b>Count: 207</b>		
<b>Point:</b> <b>Internal Combustion Engines</b> (8 digit SCC)		Includes engines for: <b>201XXXZZ Electricity Generation,</b> <b>202XXXZZ Industrial Combustion Engines,</b> <b>203XXXZZ Commercial/Institutional Engines,</b> <b>204XXXZZ Engine Testing,</b> <b>260XXXZZ Off-highway 2-stroke Gasoline Engines,</b> <b>265XXXZZ Off-highway 4-stroke Gasoline Engines,</b> <b>270XXXZZ Off-highway Diesel Engines,</b> <b>273XXXZZ Off-highway LPG-fueled Engines,</b> <b>285XXXZZ Railroad Equipment, and</b> <b>288XXXZZ Fugitive Emissions,</b> where the remaining digits are specific to a fuel and type of equipment. Note that digits XXX are for level 3 and ZZ are for level 4. <i>For example: SCC 20200103 is for internal combustion (level 1) for industrial use (level 2), that uses distillate oil or diesel (level 3), and is a cogeneration turbine (level 4).</i>	The fluid which is the “prime mover” providing the work or energy is internal to the combustion chamber. It is important to note the type of fuel being used in the combustion process, which can be found in the level 3 and 4 descriptors.
<b>First digit: 3</b>	<b>Count: 5,038</b>		
<b>Point:</b> <b>Industrial Processes</b> (8 digit SCC)		<b>301XXXZZ Chemical Manufacturing,</b> <b>302XXXZZ Food and Agriculture,</b> <b>303XXXZZ Primary Metal Production,</b> <b>304XXXZZ Secondary Metal Production,</b>	Non-combustion process (activity <i>not</i> generated to produce work or movement) where emissions are

		<p><b>305XXXZZ Mineral Products,</b>  <b>306XXXZZ Petroleum Industry,</b>  <b>307XXXZZ Pulp and Paper and Wood Products,</b>  <b>308XXXZZ Rubber and Miscellaneous Plastics Products,</b>  <b>309XXXZZ Fabricated Metal Products,</b>  <b>310XXXZZ Oil and Gas Production,</b>  <b>311XXXZZ Building Construction,</b>  <b>312XXXZZ Machinery, Miscellaneous,</b>  <b>313XXXZZ Electrical Equipment,</b>  <b>314XXXZZ Transportation Equipment,</b>  <b>315XXXZZ Photo Equip/Health Care/Labs/Air Condit/SwimPools,</b>  <b>316XXXZZ Photographic Film Manufacturing,</b>  <b>317XXXZZ NGTS (Natural Gas Transmission and Storage Facilities),</b>  <b>320XXXZZ Leather and Leather Products,</b>  <b>330XXXZZ Textile Products,</b>  <b>360XXXZZ Printing and Publishing,</b>  <b>385XXXZZ Cooling Tower,</b>  <b>390XXXZZ In-process Fuel Use, and</b>  <b>399XXXZZ Miscellaneous Manufacturing Industries,</b> where the remaining digits can be specific to an industry, a type of process, materials used, and the type of equipment being used. Note that digits XXX are for level 3 and ZZ are for level 4. <i>For example: SCC 39000402 is for an industrial process (level 1), in-process fuel use (level 2), that uses residual oil (level 3), and is for a cement kiln/dryer (level 4).</i></p>	<p>released. These SCC codes can include using a fuel in a process as opposed to burning the fuel to generate energy for production. It is important to note the type of industry, the type of process, materials used, and the type of equipment being used, which can be found in the level 3 and 4 descriptors.</p>
<b>First digit: 4</b>	<b>Count:</b>		

	<b>1,443</b>		
<b>Point:</b> <b>Chemical Evaporation</b> (8 digit SCC)	1,442	<p><b>401XXXZZ Organic Solvent Evaporation,</b>  <b>402XXXZZ Surface Coating Operations,</b>  <b>403XXXZZ Petroleum Product Storage at Refineries,</b>  <b>404XXXZZ Petroleum Liquids Storage (non-Refinery),</b>  <b>405XXXZZ Printing/Publishing,</b>  <b>406XXXZZ Transportation and Marketing of Petroleum Products,</b>  <b>407XXXZZ Organic Chemical Storage,</b>  <b>408XXXZZ Organic Chemical Transportation,</b>  <b>410XXXZZ Dry Cleaning,</b>  <b>425XXXZZ Roof Tanks*, and</b>  <b>490XXXZZ Organic Solvent Evaporation,</b></p> <p>where the remaining digits are specific to the type of storage tanks, the type of chemical being handled, the specific industry and process. Note that digits XXX are for level 3 and ZZ are for level 4.  <i>For example: SCC 40202038 is for chemical evaporation (level 1), surface coating operations (level 2), metal furniture operations (level 3), and is related to single coat application: flow coat (level 4).</i></p>	This set of SCCs applies to emissions from chemical evaporation related to the preparation and application of paints and coatings, and storage of chemicals.
<b>Point:</b> <b>Industrial Processes</b> (8 digit SCC)	1	<p><b>407XXXZZ Organic Chemical Storage.</b>  <i>SCC 40750016 is for chemical evaporation (level 1), organic chemical storage (level 2), underground storage tanks (level 3), other alcohols: working loss (level 4).</i></p>	
<b>First digit: 5</b>	<b>Count: 306</b>		
<b>Point:</b> <b>Waste Disposal</b>		<b>501XXXZZ Solid Waste Disposal – Government,</b>	SCCs in this category pertain to emissions from operations

(8 digit SCC)		<p><b>502XXXZZ Solid Waste Disposal – Commercial/Institutional, 503XXXZZ Solid Waste Disposal – Industrial, 504XXXZZ Site Remediation,</b> where the remaining digits are specific to the type of waste and equipment being used to process it. Note that digits XXX are for level 3 and ZZ are for level 4.  <i>For example, SCC 50300115 is for waste disposal (level 1), industrial solid waste disposal (level 2), incineration (level 3), and where a modular excess-air combustor (level 4) is used.</i></p>	with the specific purpose of disposing of waste (which would correspond to a combustion SCC).
<b>First digit: 6</b>	<b>Count: 344</b>		
<b>Point: MACT Source Categories</b> (8 digit SCC)			<b>These SCCs are in the process of being retired. If you have used these codes in the past, please refer to point source codes starting with “3” for the correct code to use.</b>
<b>First digits: 21</b>	<b>Count: 64</b>		
<b>Non-point: Stationary Source Fuel Combustion</b> (10 digit SCC)		<p><b>2102FFFZZZ Industrial, 2103FFFZZZ Commercial/Institutional, and 2104FFFZZZ Residential,</b> where the next three digits (FFF) are specific to the type of fuel used (level 3) and the remaining digits are specific to equipment type (level 4).                  Three digit “FFF” fuel descriptions include:                  001 Anthracite Coal                  002 Bituminous Coal                  004 Distillate Oil</p>	These are combustion emissions from non-point sources (sources that individually are too small in magnitude to report as a point source).

		<p>005 Residual Oil                  006 Natural Gas                  007 Liquefied Petroleum Gas (LPG), and                  008 Wood.</p> <p><i>For example, SCC 2104008110 is for stationary source fuel combustion (level 1), residential (level 2), where wood (level 3) is the fuel, used in fireplace: open (level 4).</i></p>	
<b>First digits: 22</b>	<b>Count: 333</b>		
<p><b>Onroad:                  Mobile Sources</b>                  (10 digit SCC)</p>	84	<p><b>220FSSRRPP:</b>                  Where,  <b>F</b> indicates fuel type (level 2)  <b>SS</b> source/vehicle type (level 3)  <b>RR</b> road type &amp;  <b>PP</b> process such as exhaust, refueling, idle, etc. (level 4).  <i>For example, SCC 2201520080 is for Gasoline highway vehicles, Single Unit Short-haul Truck, All on and off-network processes except refueling.</i></p>	<p>This set of SCCs is for emissions from activities related to transportation equipment that is typically used on roads and highways for transportation purposes. For example, processes related to trucks, motor homes, motorcycles, passenger cars, buses, etc.</p>
<p><b>Point:                  Mobile Sources</b>                  (10 digit SCC)</p>	12	<p><b>2260XXZZZZ Off-highway Vehicle Gasoline, 2-Stroke,</b>  <b>2265XXZZZZ Off-highway Vehicle Gasoline, 4-Stroke,</b>  <b>2267XXZZZZ LPG,</b>  <b>2268XXZZZZ CNG,</b>  <b>2270XXZZZZ Off-highway Vehicle Diesel,</b>  <b>2275XXZZZZ Aircraft.</b></p> <p>The remaining digits are specific to the type of equipment and fuel. Note that digits XX are for level 3 and ZZZZ are for level 4.</p>	<p>These are mobile sources and activities related to: aircraft operation and occurring at a specific 'point' airport location, such as aircraft and airport ground equipment; and rail yard locomotive exhaust emissions occurring at a known 'point' rail yard location.</p>

		<i>For example, SCC 2275050012 is for mobile sources (level 1), aircraft (level 2), general aviation Level 3), turbine (level 4).</i>	
<b>Nonroad: Mobile Sources</b> (10 digit SCC)	214	<p><b>2260XXXZZZ Off-highwaX Vehicle Gasoline, 2-Stroke,</b>  <b>2265XXXZZZ Off-highwaX Vehicle Gasoline, 4-Stroke,</b>  <b>2267XXXZZZ LPG,</b>  <b>2268 CNG,</b>  <b>2270XXXZZZ Off-highwaX Vehicle Diesel,</b>  <b>2275XXXZZZ Aircraft,</b>  <b>2280XXXZZZ Marine Vessels Commercial,</b>  <b>2282XXXZZZ Pleasure Craft</b>  <b>2283XXXZZZ Marine Vessels MilitarX,</b>  <b>2280XXXZZZ Railroad Equipment,</b></p> <p>Where the remaining digits are specific to the purpose for and type of equipment. it. Note that digits XX are for level 3 and ZZZZ are for level 4.</p> <p><i>For example: SCC 2268006015 is for mobile sources (level 1), CNG-powered (level 2), commercial equipment (level 3), air compressors (level 4).</i></p>	This set of SCCs is for emissions from activities related to transportation equipment that is not typically used on roads and highways for transportation purposes. For example, processes related to forklifts, pavers, cranes, tractors, pumps, oil field equipment, etc.
<b>Non-point: Mobile Sources</b> (10 digit SCC)	23	<p><b>2275XXXZZZ Aircraft</b>  <b>2280XXXZZZ Commercial Marine Vessels</b>  <b>2285XXXZZZ Railroad Equipment</b>  <b>2294XXXZZZ Paved Roads</b>  <b>2296000000 Unpaved Roads</b></p> <p>Where the remaining digits are specific to the type of equipment, fuel, and activity. Note that XXX is for level 3 and ZZZ is for level 4.</p> <p><i>For example: 2280002100 is for mobile sources (level 1), marine vessels,</i></p>	This set of SCCs is for non-point sources involved in mobile source operations.

		<i>commercial (level 2), diesel (level 3), port emissions (level 4).</i>	
<b>First digits: 23</b>	<b>Count: 271</b>		
<b>Non-point: Industrial Processes</b> (10 digit SCC)		<p><b>2301XXXZZZ Chemical Manufacturing,</b>  <b>2302XXXZZZ Food and Kindred Products,</b>  <b>2303XXXZZZ Primary Metal Production,</b>  <b>2304XXXZZZ Secondary Metal Production</b>  <b>2305XXXZZZ Mineral Processes,</b>  <b>2306XXXZZZ Petroleum Refining,</b>  <b>2307XXXZZZ Wood Products,</b>  <b>2308XXXZZZ Rubber/Plastics,</b>  <b>2309XXXZZZ Fabricated Metals,</b>  <b>2310XXXZZZ Oil and Gas Exploration and Production,</b>  <b>2311XXXZZZ Construction,</b>  <b>2312XXXZZZ Machinery,</b>  <b>2325XXXZZZ Mining and Quarrying,</b>  <b>2390XXXZZZ In-process Fuel Use,</b>  <b>2399XXXZZZ Industrial Processes: NEC (not elsewhere classified) and Industrial Refrigeration.</b></p> <p>The remaining digits are specific to the specific process or product that results from the activity. Note that XXX are digits referring to level 3 and ZZZ are digits referring to level 4.</p> <p><i>For example, SCC 2302070001 is for industrial processes (level 1), food and kindred products (level 2), fermentation/beverages (level 3), breweries (level 4).</i></p>	<p>These codes refer to non-point industrial process-related emissions. This set of codes contains options for reporting specific level 4 processes separately, or reporting all processes in one total (SCCs ending in 0000). For example: emissions for should be reported for SCCs 2302070001 (Breweries), 2302070005 (Wineries), and 2302070010 (Distilleries). Alternatively, total emissions for breweries, wineries and distilleries combined could be reported to SCC 2302070000. Do not report to both the “totals” SCC and the detailed SCCs. It is preferred that you report to the detailed SCCs, than to the totals.</p>
<b>First digits: 24</b>	<b>Count: 117</b>		

<p><b>Nonpoint: Solvent Utilization</b> (10 digit SCC)</p>		<p><b>2401XXXZZZ Surface Coating, 2402XXXZZZ Paint Strippers, 2415XXXZZZ Degreasing, 2420XXXZZZ Dry Cleaning, 2425XXXZZZ Graphic Arts, 2430XXXZZZ Rubber/Plastics, 2440XXXZZZ Miscellaneous Industrial, 2460XXXZZZ Miscellaneous Non- industrial Consumer and Commercial, 2461XXXZZZ Miscellaneous Non- industrial Commercial, 2465XXXZZZ Miscellaneous Non- industrial Consumer, 2495XXXZZZ All Solvent User Categories.</b> The remaining digits are specific to the kind of equipment and materials used. Note that XXX are digits referring to level 3 and ZZZ are digits referring to level 4. <i>For example, SCC 2461800001 is for Solvent Utilization (level 1), miscellaneous non-industrial: commercial (level 2), pesticide application: all processes (level 3), surface application (level 4).</i></p>	<p>These codes are for reporting emissions from non-point source activities related to the use of solvents. When reporting to these codes, codes ending in “000” are for totals across a level 3 category. Conversely, reporting to specific codes where possible, rather than to totals codes is preferable. For example, assume you are reporting solvent utilization (level 1), surface coating (level 2), and architectural coatings (level 3). You can report to the following codes individually (where the level 4 description is in parenthesis): 2401001001 (Flat Paints), 2401001005 (Nonflat Paints - Low and Medium Gloss), 2401001006 (Nonflat Paints - High Gloss), 2401001010 (Primers, Sealers, and Undercoaters) 2401001011 (Quick Dry - Primers, Sealers, and Undercoaters), 2401001015 (Stains - Semi-transparent), 2401001020 (Quick Dry – Enamels), 2401001025 (Lacquers – Clear),</p>
--------------------------------------------------------------------	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

			2401001050 All Other Architectural Categories. Or, you could report to SCC 2401001000 (level 4 “Total: All Solvent Types”).
<b>First digits: 25</b>	<b>Count: 477</b>		
<b>Non-point: Storage and Transport</b> (10 digit SCC)		<p><b>2501XXXZZZ Petroleum and Petroleum Product Storage,</b>  <b>2505XXXZZZ Petroleum and Petroleum Product Transport,</b>  <b>2510XXXZZZ Organic Chemical Storage,</b>  <b>2515XXXZZZ Organic Chemical Transport,</b>  <b>2520XXXZZZ Inorganic Chemical Storage</b>  <b>2525XXXZZZ Inorganic Chemical Transport,</b>  <b>2530XXXZZZ Bulk Materials Storage,</b>  <b>2535XXXZZZ Bulk Materials Transport,</b></p> <p>where the remaining digits are specific to the type of equipment being used and the type of chemical being stored or transported. Note that XXX are digits referring to level 3 and ZZZ are digits referring to level 4.</p> <p><i>For example: SCC 2510050380 is for storage and transport (level 1), organic chemical storage (level 2), bulk stations/terminals: breathing loss (level 3), toluene (level 4).</i></p>	<p>These SCCs are for reporting emissions resulting from storage and transport from non-point sources. As with SCCs starting with 23 and 24, there are “totals” SCCs ending in “000” that can be used to report all types of storage and transport within a level 3 category, or reporting can be done to the individual detailed SCCs. Reporting to individual SCCs is preferred. For example, you could report to all codes individually at the level 4 detail for organic chemical storage (level 2), bulk stations/terminals: breathing loss (level 3), such as SCC 2510050380 for toluene (level 4) and SCC 2510050165 for ethanol (level 4), or you could report all to SCC 2510050000 total: all products (level 4). Reporting to individual SCCs is preferred.</p>

<b>First digits: 26</b>	<b>Count: 69</b>		
<p><b>Non-point: Waste Disposal, Treatment, and Recovery</b> (10 digit SCC)</p>		<p><b>2601XXXZZZ On-site Incineration, 2610XXXZZZ Open Burning, 2620XXXZZZ Landfills, 2630XXXZZZ Wastewater Treatment, 2635XXXZZZ Soil and Groundwater Remediation, 2640XXXZZZ TSDFs, 2650XXXZZZ Scrap and Waste Materials, 2660XXXZZZ Leaking Underground Storage Tanks, 2670XXXZZZ Munitions Detonation, and 2680XXXZZZ Composting,</b> where the remaining digits are specific to the type of process or operation and the type of material involved. Note that XXX are digits referring to level 3 and ZZZ are digits referring to level 4. <i>For example: SCC 2630020001 is for waste disposal, treatment and recovery (level 1), wastewater treatment (level 2), public owned (level 3), flaring gases (level 4).</i></p>	<p>This set of SCCs is for processes involved in handling waste for the purpose of its disposal, treatment or recovery. This is different from, for example, using waste as a fuel in a combustion process. As with SCCs starting with 23-25, there are “totals” SCCs ending in “000” that can be used to report all types of a level 3 category. For example, to report emissions for waste disposal, treatment and recovery (level 1), wastewater treatment (level 2), public owned (level 3), SCCS 2630020001 (flaring gases) and 2630020010 (wastewater treatment processes total) can be used. Instead, SCC 2630020000 could be used to report both. Reporting to individual SCCs is preferred.</p>
<b>First digits: 27</b>	<b>Count: 2</b>		
<p><b>Non-point: Natural Sources</b> (10 digit SCC)</p>		<p><b>2701XXXZZZ Biogenic.</b> Note that XXX are digits referring to level 3 and ZZZ are digits referring to level 4. <i>SCCs 2701200000 and 2701220000 are for natural sources (level 1), biogenic (level 2), total (level 4),</i></p>	<p>These SCCs for biogenic emission from vegetation (not produced by human activity) and agriculture (from crops).</p>

		<i>vegetation and vegetation/agriculture respectively (level 3).</i>	
<b>First digits: 28</b>	<b>Count: 214</b>		
<b>Non-point: Miscellaneous Area Sources (10 digit SCC)</b>	205	<p><b>2801XXXZZZ Agriculture Production – Crops and Agriculture Production - Crops - as nonpoint,</b>  <b>2805XXXZZZ Agriculture Production – Livestock,</b>  <b>2806XXXZZZ Domestic Animals Waste Emissions,</b>  <b>2807XXXZZZ Wild Animals Waste Emissions,</b>  <b>2810XXXZZZ Other Combustion,</b>  <b>2820XXXZZZ Cooling Towers,</b>  <b>2830XXXZZZ Catastrophic/Accidental Releases,</b>  <b>2840XXXZZZ Automotive Repair Shops,</b>  <b>2841XXXZZZ Miscellaneous Repair Shops,</b>  <b>2850XXXZZZ Health Services,</b>  <b>2851XXXZZZ Laboratories,</b>  <b>2861XXXZZZ Fluorescent Lamp Breakage,</b>  <b>2861XXXZZZ Swimming Pools.</b></p> <p>The remaining digits are specific to the type of process. Note that XXX are digits referring to level 3 and ZZZ are digits referring to level 4.  <i>For example: SCC 2801502130 is for miscellaneous area sources (level 1), agriculture production -crops - as nonpoint (level 2), agricultural stack burning - straw stacks moved from field for burning (level 3), barley (level 4).</i></p>	This set of codes is for area sources not included in the other categories.
<b>Event: Miscellaneous Area Sources</b>	9	<b>2810XXXZZZ and 2811XXXZZZ Forest Wildfires,</b>	This set of SCCs refers to emissions from fires, as

(10 digit SCC)		<p>where the last four digits are specific to the type of fire described in SCC levels 3 (XXX) and level 4 (ZZZ). Fires can be flaming or smoldering.  <i>For example: SCC 2810001001 is for reporting Miscellaneous Area Sources (level 1), Other combustion – as Event (level 2), Forest Wildfires (level 3), Smoldering (level 4).</i></p>	<p>opposed to emissions from combustion to produce work or from a process. This set of codes includes a set of “totals” SCCs (ending in 000), for example SCC 2811015000 (Prescribed Rangeland Burning, Total (Smoldering + Flaming) for Wildfires). When using these codes, report either “smoldering” and “flaming” individually using separate codes, or report the total to the “totals” SCC.          Note that agricultural fires are not included here and can be found in the nonpoint source SCCs.</p>
<b>Grand Total</b>	<b>9,122</b>		

### III. Fields in the SCC Table

This section is a list of the fields in the SCC table and a brief description of what they mean. Note some fields are for internal EPA use:

**code:** The 8 or 10 digit code number itself.

**activity value required?:** For internal EPA use.

**data category:** Refers to whether the SCC source is Point, Nonpoint, Nonroad, Onroad, or Event. Some retired codes included a Biogenics data category but these are now considered Nonpoint.

**ert valid:** Refers to use in the Electronic Reporting Tool (ERT). This field is currently being used to identify which SCCs are used by SPPD for their regulatory purposes.

**history:** This field is currently empty for all codes but over time will be populated with a brief description of the reason for a code being created, modified or retired, where needed.

**last inventory year:** Refers to the last year the code was valid. If the cell is empty it means the code is still active. For example, if a cell contains "2002" then that code was used in 2002 but was no longer considered active in future year inventories.

**last update date:** Refers to the date when this code was last updated in some way. For example, code 10500102 has a last inventory year of 2008, effectively retiring this code for 2011 and 2014 inventories. The year this change was made is stored in the last update date of 3/27/2012.

**map to:** In some cases a code is retired or modified and a new code should be used in its place. This field shows which code should now be used. For example, SCC 10200210 was retired in 2008 and has a map to code of 10200205 which is the code that should now be used instead of 10200210.

**option group:** For internal EPA use. Refers to a group of SCCs that may overlap (parent and children SCCs). It is necessary to distinguish this group so that data that is infilled automatically within EIS is done correctly, without double-counting, during the selection generation process. See option set.

**option set:** For internal EPA use. Refers to the hierarchy of SCCs within an option group. The hierarchy is defined with an alphabetical listing of values. All records with the same option set code belong to the same "level" of the hierarchy. When a selection is performed, only SCCs of the same level of a selected record will be included for a given pollutant in the resulting selection.

**SCC levels 1-4:** are code descriptions as explained in table 2 of this document.

**sector:** Sectors can be used to summarize emissions allocating emissions to about 60 categories with multi-pollutant inventories in mind and are especially helpful for summarizing combinations of CAPs (criteria air pollutants) and HAPs (hazardous air pollutants). The EIS Sectors can also be further aggregated to provide custom summaries; one example of this is presented in the report “2008 National Emissions Inventory: Review, Analysis and Highlights” (EPA-454/R-13-005, May 2013).

**short name:** This is an abbreviated description of the code for quick reference.

**status:** If the code is retired the status is “Retired”, if the code is still active then it’s status will read “Active”.

**tier 1 – 3 codes:** For internal EPA use. These are numerical codes associated with Tier 1-3 descriptions. They are helpful when compiling emissions data by tier descriptions.

**tier 1-3 descriptions:** For internal EPA use. These are high level categories of SCCs used to summarize CAP emissions trends in EPA documents. Tier 1 is the most general and tier 3 the most detailed. These categories are broader than level descriptions. While they were created for EPA use, some SLTs find this way of grouping SCCs helpful.

**usage notes:** This field is currently empty for most SCCs but in the future will be populated with details of how to use an SCC where applicable.

#### IV. Frequently Asked SCC Questions and Answers

##### 1. When choosing an SCC what takes precedence: the function of the entire facility or the equipment itself?

The equipment itself should take precedence. The following are examples of SCC use in this context:

- **Large portable generators that power rock crushers. Are they “Electricity Generation” (because that’s what the engine does) or “Industrial” (because that’s what the site is)?** These are industrial, not Electricity Generation, because they are not generating the electricity for the purpose of putting it on the grid for someone else’s use.
- **A Diesel Fire Pump at a wood-fired power plant: is it “Industrial” or “Electricity Generation”? The fire pump doesn’t actually produce power.** Because the piece of equipment (the fire pump) doesn’t produce the electric power to put on the grid, this would be industrial. The entire facility is characterized as “EGU”, so if someone wants an accounting of all emissions from facilities engaged in producing electric power for the grid, they can use the facility type rather than individual equipment SCCs.
- **Engines at a commercial landfill that fire landfill gas to produce power for the grid. Are they “Electricity Generation” or “Commercial”?** “Electricity Generation” because equipment takes precedence.

- **A bio-research facility where a large portion of the business is producing mice to be sold to other research facilities. They work under two NAICS codes, one is considered “Commercial” the other “Industrial”? What do I use for the boilers that heat the whole place?** The NAICS code (which is a facility-level economic end product attribute) does not take precedence over the equipment itself. If the boilers are for heating, they’re “Commercial”. If the boilers produce steam (usually high pressure) for use in an industrial process, they’re “Industrial”.
- **Package boilers that provide heat to the administrative offices at a large industrial facility. Are those Industrial (because they are at an Industrial site) or Commercial (because they are package boilers heating office space)?** Boilers that provide heat to the administrative offices at a large industrial facility are “Commercial”.
- **Generators that are primarily used as back-up emergency power at a commercial facility, but are classified as non-emergency so that they can participate in a demand response program: are they “Commercial”, because they provide back-up power to a commercial facility, or “Electricity Generation”, since they can be used for peak-shaving?** Generators that are primarily used as back-up emergency power at a commercial facility are “Commercial”

**2. When should the “general” SCCs be used? For example: when should 231000000 (Oil and Gas Exploration and Production, All Processes, Total: All Processes) be used?**

You should only use a general code when you have been forced to make a general estimate of all processes and cannot separate out each individual process. The oil and gas tool for NEI reporting, for example, can assist in estimating emissions to a more detailed level so that individual processes can be reported to their corresponding SCCs without the need for the general SCC. Furthermore, reporting to both the general and individual processes will lead to double counting, so it is best to report to the detailed individual SCCs than to use the general SCC.

**3. How is the distinction made between utility, industrial, and commercial/institutional equipment?**

While size of the equipment has been suggested in the past as part of the distinction, the difference actually is whether the unit is connected to a turbine-generation set (utility), or provides industrial process steam (industrial), or provides heating/cooling/space conditioning (commercial/institutional).

**4. What is the difference between searching for SCCs in the SCC web access page and searching for them in WebFire?**

WebFIRE is used to find emissions factors associated with a given SCC. WebFIRE primarily uses the SCCs to link emissions factors to an *emission process*. WebFIRE retrieves the SCC information from the SCC Web Service you are in. You can search for emission factor reports in WebFIRE using partial or complete

SCCs. To conduct an emissions factor or report search using a partial SCC code, you do not need to use an asterisk (\*) after the partial code.

**5. Is burning landfill gas in an engine or boiler part of waste (5's) or the combustion areas (1's and 2's)?**

If landfill gas (or other byproduct or waste materials) are used as fuel for a boiler, turbine, engine, process heater, etc, it is preferred that they be coded with an SCC that reflects that use as a fuel (those SCCs generally beginning with a 1 or a 2, but there are some industrial process SCCs for these waste material fuels. If the landfill gas is being flared (not used as a fuel), the SCCs beginning with a 5 are appropriate.

**6. Is a storage tank only to be found under the Petroleum Refinery or Bulk Terminal or can it be found in other Oil and Gas industry end use segments?**

No. Storage tanks are also found at oil and gas well sites. For example: SCC 2310021010 is for Oil and Gas Exploration and Production, On-Shore Gas production, Storage Tanks: Condensate. SCC 2310010200 is for Oil and Gas Exploration and Production, Crude Petroleum, Oil Well Tanks - Flashing & Standing/Working/Breathing.

**7. In the point source world, what is the relationship between "NAICS codes" and "SCCs" if there is any kind of a relationship at all? Does an SCC for a point source uniquely identify processes in all cases?**

In general terms a NAICS code tells you what kind of economic activity is taking place in the facility (whether you are manufacturing wood products, generating electricity, or mining, for example). For more information on NAICS see <http://www.census.gov/eos/www/naics/>. The SCC code, on the other hand, describes the types of processes and technologies supporting that economic activity. Depending on the process being described, the SCC may or may not be related to the type of economic activity occupying the process in question:

**Point combustion** (level 1 described as internal or external combustion) SCCs can be crosscutting among NAICS codes. For example, a similar type of combustion boiler using the same fuel can be used to generate power in two facilities that produce different products.

For example: SCC 10200902 is for industrial external combustion wood, bar wood or bark-fired boilers. It can be used by reporting industries in wood product manufacturing (NAICS starting with 321) and logging (NAICS starting with 113). It can also be reported by utilities (NAICS codes starting with 22), and it can also be reported by certain hospitals (NAICS starting with 622).

Similarly, point SCC 39000699 for industrial processes, in-process fuel use, natural gas may apply to industries with different NAICS codes such as: iron and steel manufacturing (NAICS starting with 3311), vehicle manufacturing (NAICS starting with 3361), fabric mills (NAICS starting with 313), utilities (NAICS starting with 221) and certain kinds of chemical manufacturing (NAICS starting with 325). Whereas there are specific in process fuel use SCCs using natural gas for Cement and lime kilns, as well as for metal melting.

For many point SCCs whose Level 1 description is “**industrial processes**” the type of technology employed may be specific to an industry. In this case the level 2 description is related to what is being manufactured. For example chemical manufacturing, food and agriculture, primary metals, petroleum industry, etc.

Point SCCs whose Level 1 description is “**chemical evaporation**” are related to activities from different NAICS codes that involve the use, transportation or storage of chemicals and solvents that have evaporative emissions.

Point SCCs with a level 1 description of “**waste disposal**” are specific to any activities whose primary goal is to treat and dispose of waste. This is different from using waste as a fuel in combustion to power a process, for example. In that case, the primary reason for the use of waste is to power the process, not to manage waste.

Finally, point SCCs that apply to **mobile** sources are specific to transportation related activities.

#### **8. Is an SCC pollutant specific?**

SCCs are not pollutant specific because the SCC is specific to a process and that process may emit more than one kind of pollutant.

#### **9. What is the meaning of “last inventory year” in the SCC table**

After a code is retired it is still retained in older inventories in our system. So retired SCCs are not deleted, but instead, the “last inventory year” field is used to indicate that they should no longer be used for inventories after that year.

The “last inventory year” field indicates the last inventory reporting year that the EIS data system will accept emissions for that SCC. If an SCC does not have a value in the “last inventory year” field, the SCC is still active, and emissions will still be accepted by EIS. If an SCC has a value in the “last inventory year” field, emissions will not be accepted by EIS for that SCC for inventory years later than the year indicated. An SCC with a value in the “last inventory year” field may also have a value in the “map to” field. The “map to” field indicates a suggested active SCC for the retired SCC.

#### **10. How are SCCs used in gap filling?**

EPA gap fills HAPs where not reported by state, local and tribal organizations to build a more complete inventory. One approach used for gap filling is to compute HAPs from SLT-provided emissions. This approach uses SCC codes. HAP augmentation factors are used to compute HAP emissions from VOC, PM or SO<sub>2</sub> emissions. SCCs were used to develop HAP augmentation factors, based on the emission factors in WebFIRE which are provided via SCC code.

Unspeciated chromium (pollutant code 7440473) is speciated to hexavalent and trivalent chromium (pollutant codes 18540299 and 16065831, respectively) using chromium speciation factors. These factors were developed for specific processes from test programs and were mapped to SCC codes.