October 20, 2017

2017 NEI Final Plan

1 Introduction

The National Emissions Inventory (NEI) is a comprehensive and detailed estimate of annual total air emissions of both criteria and hazardous air pollutants (HAPs) from all significant air emissions sources. The NEI is prepared at least every three years by the U.S. EPA based primarily upon emissions estimates and emissions model inputs provided by State, Local and Tribal (SLT) air agencies, and supplemented by data developed by the EPA. The NEI is created to provide EPA, federal and state decision makers, the U.S. public, and other countries the U.S.'s best and most complete estimates of criteria air pollutants and precursors (CAPs) and HAP emissions. The NEI is used by the EPA in support of evaluating National Ambient Air Quality Standards (NAAQS), assessing interstate transport of air pollutants, air toxics programs, and for international reporting. It is also used by state and local air agencies as a starting point for State Implementation Plan (SIP) development, other federal agencies, researchers, and environmental groups to understand sources and impact of air pollution.

The NEI is created based on both regulatory and technical components. The Air Emissions Reporting Requirements (AERR) (40 CFR Part 51) is the rule that requires states to submit emissions of CAP emissions and provides the framework for voluntary submission of HAP emissions. The AERR, revised in 2015, requires agencies to report all sources of emissions, except fires and biogenic sources. The AERR also lowers the reporting threshold for lead emissions as point sources to 0.5 tons per year of actual emissions and, except for California, requires agencies to report the inputs needed to model emissions from onroad mobile and nonroad equipment mobile sources. Sources are divided into large groups called "data categories": stationary sources are reported in "point" or "nonpoint" (county totals) and mobile sources in onroad (cars and trucks), nonroad (off-road vehicles and nonroad equipment such as lawn and garden equipment), point (airports and railyards), or nonpoint (marine and locomotives). Large fires (wild and prescribed) are reported in a data category called 'EVENTS." The AERR specifies emissions thresholds above which states must report stationary emissions as "point" sources with the remainder of the stationary emissions reported as "nonpoint" sources.

Since the 2008 NEI, the Emissions Inventory System (EIS) has been the data system for collecting and storing current and historical emissions inventory data. The AERR requires the submission of data electronically to the EIS through the Central Data Exchange (CDX), and the EIS is used to receive and store emissions data and to select the data to be included in the NEI. The EIS not only holds the emissions data, it also provides all reporting codes, and EIS quality assurance (QA) checks, and there are Bridge Tools available to allow agencies to report NEI datasets to the EIS. The EIS also includes agency organization profiles such as a list of agency staff and contact information who are responsible for submitting or reviewing data. Lastly, the EIS provides feedback reports to agencies with results of EIS QA checks on reported data as well as reports on facilities and emissions useful for summarizing and reviewing agency data and the NEI.

Since the inception of the EIS, the EPA has worked to ensure that all changes to business processes, codes, QA checks, etc., are provided to the SLT air agencies by June 1 of the year that the submission window opens. For the 2017 inventory, this date is June 1, 2018. However, air agency feedback indicated that this timeline did not give SLTs enough time to implement associated changes into SLT data systems. In response to those comments, the EPA is posting changes by July 1, 2017, approximately one year before the submission window opens (18 months before the data are due).

The NEI team staff are sensitive to the impact that these changes have on SLTs and are interested in comments from the SLT air agency staff. The NEI team will assist SLT staff wherever possible to implement any needed changes into your system. While we try to minimize changes to the EIS, these improvements are intended to help the EPA to create a more complete, accurate, and timely inventory, which is ultimately also in the best interest of SLT agencies as well.

2 Schedule

The detailed draft schedule for the 2017 NEI is provided below. A key change to this schedule from what was done for the 2014 NEI is that most of the nonpoint inventory will be created using a staggered schedule and we will also encourage submittal of input activity date for many nonpoint sources. For the 2017 NEI, EPA has decided to divide the nonpoint tools into three categories to allow more resources and time for collaboration on the most important and complicated tools. This staggered schedule of EPA nonpoint tools will allow more focus on specific nonpoint tools in discrete timeframes during the 2017 NEI development cycle, and will avoid dumping an overwhelming number of new and revised EPA estimates at once on the SLT inventory developers. These nonpoint tools are encouraged for use by SLTs for improving emissions calculations using consistent and defensible methods. SLTs who choose to have the EPA calculate their nonpoint sector data using these tools would need to send that data by the date(s) shown to participate. Otherwise, SLTs may submit emissions data on the AERR required schedule. More details on the 3-Category staggered schedule of EPA nonpoint tools and input activity submittals are provided in Section 5.4.

We provide a refined schedule for releasing data in the EIS, which precedes the public NEI release by several months for some data categories. Barring some possible last-minute changes in data, data in the EIS release will be identical to the public release data for the NEI. We provide the EIS data early because some data category inventories will be finalized and thus available sooner than others, and also because it takes a few weeks to build all data summaries and documentation that accompany the public release of the NEI. Only SLT inventory developers have access to the EIS datasets, which are available early for early analysis of NEI data for SLT inventory developers.

As was done for the 2014 NEI, comments on the draft 2017 NEI will not be permitted to include SLT agencies submitting wholesale replacement data. In the past, allowing wholesale replacements had the unintended effect of delaying the NEI release by many weeks or months and increasing EPA costs to unsustainable levels. SLT agencies will still be able to send data corrections during a QA period. We are including a placeholder for a second version (“v2”) of the 2017 NEI, but the timing of this is unknown, likely to again be dependent on modeling, risk assessment or other policy needs.

Resources	Submission/Comment Window

2017 National Emission Inventory Timeline		
General Activities		
Item	**Details**	**Timeframe**
Finalize changes to codes and QA routines for 2017	Code changes and QA routines to be reflected in EIS	11/15/2017
EPA posts expected pollutants list to website	Point, Nonpoint and Events only	11/15/2017
Submission Window Opens for SLT submittals	All data categories	6/15/2018
SLTs last day for EIS submittal of Point, Onroad Mobile, Nonroad Mobile and Events data category emissions	The regulatory deadline for emissions data and model inputs is December 31, 2018. However, the EPA provides a grace period because of the holidays at the end of the season, and also has later dates for some sectors to allow time for some nonpoint sectors that have underlying data available at later dates.	1/15/2019
2017 v1 Public Release	Includes functioning NEI Data page with query tools, summaries and Technical Support Documentation	1/31/2020
2017 v2 NEI Release in EIS for all data categories		**TBD**
2017 v2 Public Release		**TBD**
Point Inventory Development		
Item	**Details**	**Timeframe**
Provide SLT List of Priority Pollutants/Facilities	On 2017 NEI Documentation website or SharePoint	10/31/2017
EPA 2017 landing/takeoff (LTO) data available for SLT review period	On 2017 NEI Documentation website or SharePoint	10/1/2018
SLTs last day for submittal of Facility Inventory edits to EIS		1/8/2019
SLTs last day for submittal of Point emissions to EIS		1/15/2019
SLT comments on EPA LTO data due		1/15/2019
EPA loads EPA-estimated 2017 EGU Emissions to EIS		1/15/2019
EPA provides feedback to SLTs on data completeness and outliers	Window open on a case-by-case basis for corrections only	2/15/2019
SLT corrections based on EPA feedback due		5/15/2019
2017 draft NEI Point Release in EIS		6/1/2019
SLT Review of draft Point		6/22/2019
2017 final NEI Point Release in EIS		7/1/2019
Nonpoint Inventory Development		
Item	**Details**	**Timeframe**
EPA posts draft v1 tools and methodology for Category 1 sources	Based on similar methods to EPA methods developed for the 2014v2 NEI -posted on NOMAD (Nonpoint Method Advisory) SharePoint site	3/31/2017
SLT comments on Cat 1 draft tools due	Comments submitted via email to NEI team lead	5/31/2017
Post list of nonpoint sectors where EPA will develop estimates	See Section 5.4	5/31/2017
EPA works with NOMAD group to refine and post updated Nonpoint Survey and point-nonpoint reconciliation table	Nonpoint Survey posted in EIS and Point-Nonpoint Reconciliation spreadsheet posted to NEI website or SharePoint	1/15/2018 – 6/15/2018
SLT deadline to submit inputs for Category 1 tools used in draft 2017 NEI	Though not required (by the AERR), we will allow final SLT input submittals until the extended-AERR deadline 1/15/2019	1/15/2018
EPA posts v1 tools for Category 1 sources	Includes any SLT inputs submitted by 1/15/2017	1/31/2018
EPA posts 2017 draft nonpoint emissions from Category 1 tools in EIS	Reflects EPA estimates plus any SLT inputs submitted by 12/31/2017	2/28/2018
EPA posts draft v1 tools and methodology for Category 2 sources	Methodology revisions dependent on resource limitations -posted on NOMAD SharePoint site	2/28/2018
SLT comments on Cat 2 draft tools due	Comments submitted via email to NEI team lead	4/15/2018

Nonpoint Inventory Development		
Item	**Details**	**Timeframe**
SLT deadline to submit inputs for Category 2 tools used in draft 2017 NEI	Though not required, we will allow final SLT input submittals until the extended-AERR deadline 1/15/2019	6/15/2018
EPA posts Final Methodology for Category 2 tools	On SharePoint	7/31/2018
EPA posts draft v1 tools for Category 3 sources	Methodology revisions dependent on resource limitations, posted on NOMAD SharePoint site	8/31/2018
EPA posts v1 tools for Category 2 sources	Includes any SLT inputs submitted by 6/15/2018	9/30/2018
EPA posts commercial marine vessel shapefile fractions to CHIEF		9/30/2018
EPA posts 2017 draft nonpoint emissions from Category 2 tools in EIS	Reflects EPA estimates plus any SLT inputs submitted by 6/15/2018	10/31/2018
SLT comments on Cat 3 draft tools due	Comments submitted via email to NEI team lead	11/30/2018
SLT deadline for submitting non-Category 3 portions of Nonpoint Survey	Category 1 and 2 SCCs in Nonpoint survey will be locked after this date	1/15/2019
SLT deadline for submitting all non-Category 3 emissions		1/15/2019
EPA posts v1 tools for Category 3 sources	SLTs have to decide if they want to submit emissions instead of either accepting EPA estimates, or submitting inputs by 5/31/2019	2/28/2019
SLT deadline for submitting Category 3 portion of Nonpoint Survey		3/31/2019
SLT deadline for submitting emissions for Category 3 sources	If SLT chooses not to submit inputs	3/31/2019
SLTs submit inputs for Category 3 tools	Note that we are allowing beyond the extended-AERR deadline for Category 3 input submittals only. All non-Category 3 inputs and/or emissions are due 1/15/2019, and Category 3 emissions are due 3/31/2019	12/1/2018 – 5/31/2019
EPA provides feedback to SLTs on data completeness and outliers	Window open on a case-by-case basis for emissions only. We will note where SLTs submitted acceptable inputs rather than emissions	7/1/2019
EPA posts final nonpoint emissions for Category 3 tools in EIS		8/31/2019
2017 NEI Release in EIS for all nonpoint except draft and/or EPA-only estimates for Category 3 sources	Should be close to final v1 except for Category 3 sources where SLTs submitted inputs	9/30/2019
SLT corrections based on EPA feedback due	Activity data only	10/1/2019
EPA solicits corrections on case by case basis		10/15/2019– 11/30/2019
2017 v1 NEI Release in EIS for all nonpoint	Including Category 3 sources	12/31/2019
Onroad/Nonroad Inventory Development		
Item	**Details**	**Timeframe**
Post instructions and 2017 default inputs for onroad and nonroad	On 2017 NEI Documentation website or SharePoint	6/1/2018
SLTs last day for submittal of Onroad/Nonroad activity input data to EIS		1/15/2019
EPA provides feedback to SLTs on data completeness and outliers	Window open on a case-by-case basis for activity data corrections only	5/1/2019
SLT corrections based on EPA feedback due	Activity data only	7/1/2019
EPA solicits corrections on case by case basis		5/15/2019– 7/31/2019
2017v1 NEI release in EIS		9/15/2019

Events Inventory Development		
Item	**Details**	**Timeframe**
Re-assembly of Fires workgroup	We will start up the workgroup as we had for the 2014 NEI with new members added as requested	3/1/2018
Request 2017 activity data from SLTs and other local organizations	EPA will send Excel-based template for SLT use via email	3/15/2018
Memo to all SLTs on how EVENTS will be done for 2017	Memo to explain EPA methods and why activity data are preferred and what is needed with emissions if they are submitted	3/15/2018
Questionnaire to all SLTs	Used to help EPA assess SLT-submitted activity data	3/15/2018
Draft activity data and answers to questionnaire	Due date for draft activity data from SLTs and answers to questionnaire	6/15/2018
EPA communication back to SLTs on the quality of the submitted activity data		7/15/2018
Provide SMARTFIRE2 (SF2)-based draft emission estimates	A draft methodology will also be provided	9/30/2018
Review of draft emission estimates	Due data to submit new inputs and/or comments on estimates and methods	12/15/2018
EPA posts rerun of SF2 with documentation outlining changes from draft	Will reflect suggested revisions/comments from draft review as resources allow	3/1/2019
Final SF2 results review by SLTs	Only minor changes will be allowed due to resource limitations	5/1/2019
Develop final EPA-based WLF emission estimates for the US, including final documentation	These will be the final EPA estimates. See Section 7.1.	7/1/2019
2017v1 NEI release in EIS		9/15/2019

Note: The 2018 NEI submission window for the point source inventory will open on June 15, 2019, and close on January 13, 2020. The 2018 NEI Point inventory will be released in EIS on July 13, 2020. Also, the 2016 NEI submission window for the point source inventory opened on July 1, 2017, and will close on January 15, 2018. The 2018 NEI Point inventory will be released in EIS on July 13, 2018.

2.1 How will agencies make data corrections to the NEI data during the QA period?

EPA inventory developers will work with SLT agency staff to provide feedback on their data and allow corrections on a case by case basis. Corrections will be done similarly to what was done for the 2014 NEI v1 review during early 2016. SLT agencies will submit their corrections to the EIS "QA Environment" and select "Request Assistance" on their clean feedback report. EPA staff then will review the corrections and open the window for SLT submission to Production.

2.2 Why has EPA eliminated wholesale data replacements?

EPA inventory developers do extensive QA on data received by the submission due date. Allowing wholesale replacements, or initial submissions long past the original due date, causes EPA staff to run the complete QA procedure on all data again. This process delays the NEI release, increases EPA's use of resources, and does not provide the benefit of the draft review and correction process described above. This change places a lot of importance on the end of the submission grace period on January 15, 2019. It is very important that SLTs meet the submission grace period deadline of January 15, 2019 with their best data in order that the QA review and correction process can proceed.

2.3 What best practices will help my agency meet the deadlines in this schedule?

To assist you in allocating your time and resources to complete this requirement, we are including a suggested timeline for the facility, point and nonpoint data categories in "Appendix 1 – Suggested SLT Timeline and QA Checks" on the 2017 National Emissions Inventory Documentation website. Also, included in Appendix 1 are suggested QA reports to run upon completion of your production submission. To take advantage of these reports, your data will need to have been submitted early enough that you can check for data quality and adjust your previously submitted file. Remember that when submitting batch XML file corrections to your emissions data that you must report the full suite of required pollutants and not just the pollutant emissions needing correction.

3 General changes to the 2017 NEI process

This section provides some general changes to the 2017 NEI process that affect all or several data source categories. The subsequent sections of this plan include additional information regarding sector-specific changes.

3.1 AERR

While the AERR requirements result in a December 31, 2018 deadline for submitting the 2017 NEI data, we understand the difficulties this presents to SLTs agency staff due to holiday schedules. Therefore, we are proposing an additional two-week grace period that will end on January 15, 2019. In addition, as discussed in Section 5.4, we are conditionally extending the deadline for some key nonpoint sectors (which we denote as Category 3) that are covered by EPA tools and rely on point inventory subtraction.

3.2 EIS Reporting Codes

EIS code tables that have been updated, or will be updated before October 2017, are listed below; these code changes are provided in separate worksheets in the "Appendix 2 -2017 NEI Plan Code Changes" workbook on the 2017 National Emissions Inventory Documentation website. Refer to the "readme" spreadsheet in Appendix 2 for information on each of these code change spreadsheets, including an initial release date, a last updated date, spreadsheet description, and a field describing updates, or expected updates, to the initial spreadsheet. As these updates become available, we will update both the Appendix 2 worksheet(s) and will send emails to the existing NEI/EIS listserv contact list -consisting primarily of EIS inventory developers for each agency.

1. Control Measure Codes: We expect to receive and post new codes by mid-July 2017. The spreadsheet will be updated at that time.
2. Unit Type Codes: An initial set of new unit type codes are provided in red font in the spreadsheet. We will add additional new codes later in July 2017 for Printing, Refineries and Waste Disposal. New codes for Pulp and Paper are also planned but timing is unknown.
3. Source Classification Code (SCC) Changes
    a. Point: There have been several changes since the 2014 NEI that are already in the EIS SCC table. Currently, SCCs for Printing, Refineries and Waste Disposal sources are being reviewed as part of a periodic effort to streamline SCCs in some sectors. EPA is evaluating creating new SCCs or modes to capture aircraft cruising emissions by aircraft type for better emission distributions in ambient modeling. We will update the spreadsheet in Appendix 2 once we have the proposed changes for these SCCs. Additionally, specific sector SCCs may be reviewed as part of upcoming Risk Technology Review (RTR) rules that

could happen in the next three years. They are listed in "Appendix 3 – The "Draft Schedule for Potential Point SCC Revisions" can be found on the 2017 National Emissions Inventory Documentation website. If any SCC revisions from these reviews occur before the submission deadline, we will update the Appendix 2 spreadsheet. There will be an opportunity to comment on any of these SCC changes if and when they happen.

b. Nonpoint: Many SCCs are proposed to be retired, and several new SCCs either need to be created or brought back from retirement. Most of the SCCs we are proposing for retirement were not used by SLTs in their 2014 submittals, and those that were can be mapped to different existing SCCs. The primary reason for removing these extraneous SCCs is to prevent possible double-counting of emissions and confusion over what the SCC is intended to capture.
c. Events: For 2017, we are considering adding an SCC in EVENTS separately for pile burns. But before we can do that, we need to develop a method and default activity parameters for it in the modeling platform we use to develop fire emissions for the NEI. We will work with SLTs on this new NEI data source as SLTs have already indicated that activity data (e.g., tons burned via permits) may be available for inputs to this new source/SCC.
d. Onroad: No new SCCs are expected
e. Nonroad: New SCCs for MOVES are expected but timing is unknown.

4. Pollutant Codes
    a. Recent efforts to incorporate test data from regulations into EIS have resulted in the need to revisit the current pollutant codes. The rule data require a more expansive list than the current EIS list. To allow for future selections to include these data, we may make changes to the pollutant table. Discussions are currently underway on which changes will be needed to support rule data and if these will affect agency submissions. These changes would result in additional pollutant codes and would not result in retiring any pollutant codes.
    b. Eighteen (18) Glycol Ether pollutants are no longer classified as HAPs but have been changed to a classification of "OTH" or "Other". These pollutants did not meet the CAA definition of glycol ether established by the final rule "Redefinition of Glycol Ethers Category under Section 112(b)(1) of the Clean Air Act and Section 101 of the Comprehensive Environmental Response, Compensation and Liability Act (40 CFR 63)". We chose to allow agencies to continue reporting these to prevent unimportant EIS error messages; however, these 18 pollutants will not be selected for the 2017 NEI because they are not HAPs. The only "OTH" pollutants to be selected for the 2017 NEI are hydrogen sulfide, tert-butyl acetate and the species listed in the following item.
    c. For the 2014 NEI, we added 5 PM2.5 species (EC, OC, NO3, SO4 and PMFINE) and 2 diesel PM species to the NEI that are generated only by EPA through PM speciation. These pollutants will also be in the 2017 NEI, but as with 2014, they cannot be reported by SLT.
5. NAICs Codes: The list of NAICS codes that will be valid and acceptable in EIS will be updated to reflect the retirements and additions made by the US Census Bureau for their 2017 revision. In addition, for EIS, we will not accept any of the 1-, 2-, or 3-digit level NAICS codes in the Census Bureau's list. Note that in the past we have accepted the 3-digit NAICs in EIS. A small number of actively reporting EIS facilities have been edited to a minimum of 4-digits.

While the above is the extent of known retired and additional codes, new codes for these and other EIS datasets may be added later in the year if deemed necessary. No codes will be retired after the publication of the final version of this plan expected by October, 2017.

3.3 Expected Pollutants and Data Categories

SLT agencies have requested that EPA provide a list of expected pollutants by process (SCC), and we provided these for the point and nonpoint data categories in preparation for the 2014 NEI. For the 2017 NEI cycle, the EPA will provide an updated list for nonpoint sources. The existing list for point sources remains in effect. These lists of expected pollutants should be available on the 2017 National Emissions Inventory Documentation website by the end of October 2017 for point, nonpoint and event data categories.

The reporting of criteria air pollutants (CAPs) is required under the AERR for all data source categories, while the reporting of hazardous air pollutants (HAPs) is not. However, HAPs are critical to complete the NEI, and will be supplemented by EPA if SLTs do not provide these data, and therefore, HAPs will also be included in these lists.

An SLT's agency data submittal will not be considered "incomplete" if it does not voluntarily report HAP emissions, but it will be augmented with EPA estimates of HAPs using EPA data augmentation procedures.

The purpose of the expected pollutants list depends on the data category. Each data category is discussed in the following subsections.

3.3.1 Point

For point sources, the expected pollutants list indicates where other agencies have reported non-trivial amounts of a pollutant for each SCC, based on the following criteria:

1. The SCC contributes at least 0.1% of the total national emissions for that pollutant, and includes an existing emissions factor (e.g., AP-42), OR
2. The SCC contributes at least 0.01% of the total national emissions for that pollutant, and 75% of the processes using that SCC reported that pollutant (with a minimum sample size of 3 processes), and the SCC does not include a nebulous catch-all "Other" or "Miscellaneous – NEC" in the description;
3. For fuel combustion SCCs, we include the same pollutants across all related SCCs for the same fuel.

SLT-submitted pollutants that are not in the expected pollutants list for point sources will be used in the NEI. We may however tag out pollutants which are clearly not only not expected, but also nonsensical, such as VOC or NOx emissions from rock crushing SCCs.

EPA will add HAPs to facilities where they are not reported by SLTs by first using the TRI-reported data and second by relying on SLT-submitted VOC or PM values via HAP augmentation. EPA may use other sources of data, where available, including carrying forward previous-year data for gap filling. The database providing the HAP augmentation factors is in the Emissions Inventory System Gateway. This database is updated based on comments from the NATA reviews, and may be further updated if new factors become available or if errors are found. SLTs should use their existing emission factors, or preferably source tests, prior to the submittal deadline, and not rely on EPA's HAP augmentation dataset for inventory construction. The version of the HAP augmentation database to be used for the 2017 NEI

will be finalized by 1/15/2019. As with the 2014 NEI, SLT-reported chromium will be speciated into chromium (VI) and chromium (III) using chromium speciation factors provided in the HAP augmentation database.

3.3.2 Nonpoint

One of the goals in developing the NEI is to have as cohesive and congruent of a picture of the air pollutants in the nation for a particular inventory year. In order to create this cohesiveness, EPA has to treat data in a consistent way when emissions data submitted by states looks too large in comparison to the rest of the data, or incorrect. Therefore, for the nonpoint sources, the expected pollutants list will have a more active role in what ends up in the NEI, and a set of business rules has been proposed to streamline this process. The expected pollutants list will be developed from all 2014v2 NEI EPA estimates and will include HAPs and CAPs that EPA will gap fill if these data are not submitted by the SLT agencies. If EPA does not estimate emissions for a particular source type, there will be no expected pollutants list for comparison, as EPA acknowledges that those source categories that are not estimated on a national basis are not well-assessed by EPA at this point in time.

For the expected pollutants list, all pollutants for each nonpoint SCC will be provided and a statistical county-level outlier check will be developed to provide meaningful expected maximum values for each SCC/pollutant/county where EPA develops estimates. We will map expected pollutants to most active SCCs in sectors where EPA estimates exist for other like-process/fuel SCCs based on data in the existing EIS HAP Augmentation table. It should be noted that EPA may not have adequate data to provide feedback on whether these data exceed our threshold for outliers, since EPA will not have estimates for these particular SCCs themselves.

For the 2017 NEI, we are proposing the following set of business rules to be used in conjunction with the nonpoint expected pollutants list. Note each of the following items has accompanying explanatory text following the table.

Item	If an agency submits…	EPA will …	Unless…
1	Emissions that exceed EPA expected outlier check values	Use EPA estimates in lieu of SLT data	State provides supporting material on how the emissions were estimated, including activity and emission factor details where available
2	Pollutants not in expected pollutant list	Remove these pollutants (e.g., VOC from road dust, metals from evaporative processes)	SLT provides documentation on these unexpected pollutants
3	VOC but no HAPs	Run HAP augmentation off of the SLT-submitted VOC, and this data will take precedence over any EPA tool data	The VOC submitted falls outside of EPA's expected outlier check

Item	If an agency submits…	EPA will …	Unless…
4	Total VOC-HAPs > VOC (the sum of all of the HAPs that are VOCs adds up to more than the submitted VOC value)	Remove all state submitted VOC-HAP data and instead, use HAP augmentation off of the SLT VOC value	
5	VOC and different VOC-HAPs than our expected pollutant list	Gap fill using HAPs generated by HAP augmentation off of the SLT VOC value	The sum of augmented + SLT-submitted VOC-HAPs adds up to more than the VOC value; (see 4 above); in this case, all SLT HAPs will be removed and replaced with HAP augmentation off of the SLT VOC value
6	An incomplete set of expected criteria pollutants	Supplement using EPA tool data for the pollutants that are not submitted	SLT provides documentation to why those emissions should not exist
7	VOC data for different SCCs, but similar process characteristics to what EPA uses	EPA will augment VOC-HAPs with similar profiles	State also submits HAPs with that VOC

For item 1, regarding emissions greater than outlier checks, the intention is to prevent inconsistencies when looking at the nation as a whole, which may not really exist, and may instead be due to a mistake in calculations or data entry. EPA will initiate a dialogue with reporting agencies where submitted emissions exceed expected ranges, particularly for rapidly changing sectors such as oil and gas. These outlier checks will be based on county-SCC-pollutant level statistical analysis of the EPA estimates generated for the 2014v2 NEI. Supporting documentation requirements are not intended to be onerous, but can serve as a path for EPA to get confirmation that SLTs intend for significantly larger than expected emissions to be included in the NEI, may help inform EPA's tools, and can allow EPA to revise the outlier checks where needed. Outlier limits can be found by pollutant/SCC combinations in EIS under Reporting Code Tables, Emission QA Values.

Item 2, regarding unexpected pollutants, is intended to prevent inconsistencies or incongruent data from showing up in the inventory, which may not be "real." Sometimes an agency submits pollutants that no other state agency reports, and this may appear as an anomaly on the map for a particular pollutant when looking at a source category as a whole. For example, one state agency reported lead as a pollutant from commercial cooking. While this may be a real pollutant from the restaurant griddles, it also may be a misassigned SCC or pollutant code. In any case, if EPA deems it an "unexpected pollutant," EPA may not have a good emission factor or may not have the data to support that a certain pollutant is part of a source category. In these cases, when comparing the EPA dataset to SLT datasets, a hotspot may show up, highlighting the submitting state, in this example, as the only place in the country where you could find lead being emitted from restaurants.

Item 3, regarding VOC submitted without their corresponding HAPs, is straightforward; the goal is to fill in missing HAPs in the inventory where EPA expects them to exist but they were not provided by the submitting agency. HAP augmentation on SLT-submitted VOC will be used when it does not exceed the

outlier check and VOC is reported but VOC-HAPs are not. Item 1 would apply where the outlier check is violated.

Item 4, regarding VOC-HAPs summing to greater than VOC, is the broad check for where the sum of all SLT-submitted VOC-HAPs must be less than SLT-submitted VOC. EPA is conducting this analysis to prevent nonsensical data, since the parts should not add up to more than the whole. If a violation occurs, SLT-submitted VOC is retained, but all SLT-submitted VOC-HAPs are not used (tagged out) and replaced with HAP augmentation VOC-HAPs after scanning for obvious outliers.

Item 5, regarding different HAPs being reported than EPA's expected pollutants, builds off item 4 in complexity, dealing with the messy scenario where we end up with a mix of SLT-reported VOC-HAPs and VOC-HAPs from HAP augmentation. Like item 4, the intention is to prevent nonsense data where the parts sum up to more than the whole. This happens when SLTs submit VOC and some but not all expected VOC-HAPs, and HAP augmentation, based on SLT-submitted VOC, is used to "gap fill" the remaining unreported VOC-HAPs. It is understandable that SLTs may only have emission factors for some VOC-HAPs and that the method may be different from the VOC emission factor. However, air quality modeling based on the NEI assumes a level of VOC-HAP to VOC mass closure. Therefore, if SLTs do not want EPA to generate "missing" VOC-HAPs, they should submit emissions for VOC-HAPs that are in the expected pollutants list. SLT could submit zero emissions if these pollutants are not emitted from these processes in a particular area due to controls, bans or other location-specific information.

Item 6, regarding missing criteria pollutants, is intended to provide a cohesive inventory; for example, if NOx is not submitted for a combustion category, EPA has the need to gap fill. This rule is simply a reflection of how the NEI has been built in the past: SLT data takes precedence over EPA-submitted emissions. If EPA data exist for pollutants that SLTs do not submit, then EPA data "gap fills" and appears in the NEI selection. If SLTs do not want EPA data, that are in the expected pollutants list, to appear in the NEI, they have a couple options:

1. Submit emissions, which could be zero if these pollutants are not emitted from these processes in your jurisdiction for these "expected" pollutants, to ensure EPA emissions data do not appear in the NEI, or
2. Contact EPA to request removal (tag-out) of EPA emissions for these pollutants, if they are not emitted.

Option 1 is more automated and easier to track. This item is most important for CAPs and "high risk" HAPs. Option 2 has been the standard approach in previous NEI cycles; however, it complicates QA and has led to numerous errors in the past.

Item 7, regarding running HAP augmentation on similar SCCs to those for which EPA has profiles, is also intended to fill missing pollutants in the inventory, and this has been standard procedure in previous NEI cycles. Where SLTs report emissions for SCCs that EPA does not report, EPA data will be used if SLTs do not report all pollutants, and this goes beyond just HAP augmentation for VOC-HAPs.

Voluntary reporting for HAPs, particularly, VOC HAPs, gets complicated for some nonpoint sources where EPA provides tools that include point source (inventory) subtraction. For example, the Industrial and Commercial/Institutional tool only subtracts point inventory CAPs, and not VOC HAPs, when choosing to subtract point emissions and not activity data. The ICI tool in this case will compute nonpoint VOC via

point subtraction of emissions, then use HAP augmentation (matching augmentation profiles in the EIS, but also built into the tool) to compute nonpoint VOC HAPs. The reason EPA built the ICI tool to not subtract VOC HAP point emissions is because the material balance for point subtraction (reconciliation) is ideally based on activity/throughput of the material being balanced. Emissions, or emission factors, from any source, have no validity in such a material balance. SLTs are free to recompute their VOC HAP emissions for nonpoint ICI sources, and so long as these VOC HAP emissions satisfy the checks discussed above, they will be accepted.

None of these business rules impact what is stored in the EIS for each agency--only what will appear in the NEI selection. EIS reports run off of SLT datasets will still capture what SLTs submit. However, the final 2017 Inventory will reflect a converged set of data, with EPA tool data, SLT submitted data, and augmentation datasets included.

3.3.3 Mobile and Events

Onroad and nonroad expected pollutants are the CAPs and HAPs generated by MOVES.

The expected pollutants for the EVENTS category are those that we estimate in EPA's methods. It is expected that this list will remain the same as it was for the 2014 NEI. That list can be found in Section 7 of our 2014 NEI Technical Support Document.

3.4 EIS QA Checks

A list of QA checks performed on data submittals can be found in the Emissions Inventory System Gateway. The following additional QA changes are being proposed for the 2017 NEI cycle.

1. **Additional critical QA checks.**
    a. New requirement for reporting "heat values" when SLTs report events inputs -see Section 7.2.2.
    b. "CURIES" can now only be used as the unit of measure for radioactive pollutants.
2. **Additional warning QA checks**. There are no new warning checks.
3. **Update from Warning to Critical**
    Check 511 – Release Point Stack Temperature Measure Range will be upgraded from warning to critical.
4. **Deleted QA checks**
    a. Check 1152 – Release Point Exit Gas Velocity Measure Critical Range – duplicate check of checks 512 and 517
    b. Check 1153 – Release point Exit Gas Flow Rate Measure Critical Range – duplicate check of checks 518 and 519
    c. Check 2211 – Release Point Exit Gas Temperature Measure Outer Range – duplicate check of check 511

The remaining changes pertain only to fires in both the Nonpoint and Event data categories:

5. **Check for valid Emission Calculation Method Code (Critical)** – When reporting emissions for SCCs 2810001000, 2811015000, and 2811020000 in the Event Inventory, data submitted will be required to use either Emissions Calculation Method Code 40 – Emission Factor based on Regional Testing Program; 41 – Emission Factor based on data available peer reviewed literature; or, 42 – Emission Factor based on Fire Emission Production Simulator (FEPS).

6. **Check for present Event Staging Code (Critical)** - Event Staging Code has been raised to a "critical" check, making this data field required.
7. **Check for valid Event Staging Code (Critical)** – Event Staging Code will be limited to reporting combinations of Flaming (F) and Smoldering (S); S and Both (B); F and B; or F, S and B for the same reporting period. The reporting of a single staging code will be rejected. e.g. Report only flaming without either smoldering or both will reject the flaming record for that reporting period.
8. **Ensure Activity values are reported (Critical) –** For all SCCs with a Tier 3 description of Agricultural Fires, the following EIS fields will now be required: Calculation Parameter Type Code (I), Calculation Parameter Value (number of acres burned), Calculation Parameter Unit of Measure (Acre), and Calculation Material Code (111-Fire). See Appendix 4 in the 2014 NEI Plan on the 2014 NEI Documentation website for these SCCs.

3.5 EPA Completeness Feedback

The NEI data are the foundation for key EPA regulatory and other analyses. Due to the importance of this inventory, the EPA will again provide completeness reports. In the 2017 NEI cycle, the completeness reports will be available through the EIS Gateway to SLT agency staff and the EPA regional offices. Allowing SLT agency staff to run these reports themselves will provide SLTs with the greatest possible time to address any incomplete findings. SLT agencies will only be able to see completeness reports for their own agency and delegated agencies. With the release of the 2017 NEI, letters based on the final completeness reports will also be provided to state and local Air Directors.

The completeness checks will be based on the following criteria:

Point:

1. Check that all facilities with an operating status of OP (Operating) have been reported. This will be done using the Agency Submission History Report available on the EIS Gateway.
2. Percent of completeness based on SCC/expected CAPs. Voluntary HAP data submission will be noted, though lack of HAP data will not count against a completeness percentage. These checks will be available via a completeness report function in the EIS Gateway.

Nonpoint:

1. Completion of a nonpoint survey.
   This survey will be greatly simplified from that which was implemented in 2014. At this time, we expect it will only have one question with a few choices of answers: either EPA should supplement the SLT submission or not, on an SCC basis. The reasons for not supplementing would be: 1) SLT does not have this type of source in the state (i.e., no coal fired residential boilers), 2) SLT covers this category in point (i.e., gas stations are all covered in point in the state of Colorado), or 3) SLT uses a different SCC that covers the same process covered by the SCC used by EPA that also covers additional processes (e.g., composting under SCC 2680002000 where this SCC covers both green waste, which EPA methods cover, as well as other materials being composted). This nonpoint survey is still being developed, in conjunction with the Option Group/Option Set functionality, which when run properly in EIS, will eliminate duplicates from overlapping nonpoint SCCs.
2. Percent of completeness based on SCC/expected CAPs.

Voluntary HAP data submission (or acceptance of EPA data) will be noted, though lack of HAP data will not count against a completeness percentage. These checks will be available via a completeness report function on the EIS Gateway.

Onroad/Nonroad:

1. Completeness is based on an agency either submitting inputs or accepting EPA estimates.

Events:

1. Completeness is based on an agency either submitting inputs or accepting EPA estimates. In the cases where they do submit emissions, completeness will be based on submitting all the pollutants we estimate in EPA's methods. This includes CAPs, HAPs, and GHGs. Additional efforts to provide fire activity data from state forestry programs will be noted.

The table below provides an example feedback table that would be compiled from the EIS completeness reports and included in the letters to the Air Directors. Ongoing work to resolve the details on the final feedback letter may change this example.

Data Category	Status	Percent Complete[1]	Voluntary HAP level[2]	What to do
Point sources	75% of facilities reported	60%	Modest	Report remaining facilities or indicate facility shutdowns. Reporting all expected criteria pollutants for reported SCCs or correct SCCs.
Nonpoint sources	Survey submitted, Data partly complete	80%	High	Report remaining expected criteria pollutants for SCCs reported.
Onroad mobile sources	Inputs not provided	0%	No data	Submit model inputs or accept EPA inputs/emissions.
Nonroad equipment sources	Inputs not provided	0%	No data	Submit model inputs or accept EPA inputs/emissions.
Events	Inputs provided EPA data accepted	200%	High	

[1] Based on expected SCC/pollutant combinations for pollutants required by the Air Emissions Reporting Rule.

[2] Level as compared to all other agencies submitting data. High = Submitted and highly complete; Modest = Between 40% and 70% expected HAPs provided for SCCs reported; Low = few SCCs reported with HAPs or less than 70% of expected HAPs for SCCs reported; No data = no HAP data or model inputs were reported.

4 Point sources

4.1 Overview

Air agency point source data are the predominant source of point source data in the NEI. Point source reporting includes both the "facility inventory" and "emissions" as separate reporting steps, each with their own set of tables defined for electronic reporting. The following subsections provide a road map to the requirements from the AERR and the best practices for submitted data. Additional subsections provide specific information on point-source specific practices for the 2017 NEI, including a discussion

on how EPA intends to include Greenhouse Gas (GHG) emissions for 2017 and treatment of fugitive release point parameters in EIS for modeling.

As in past NEI cycles, the EPA intends to augment state point source emissions when needed. Augmentation includes PM augmentation, HAP augmentation (factors to ratio HAPs from CAPs), chromium speciation, and including emissions from the TRI.

4.2 AERR Requirements

Please refer to 40 CFR Part 51, Subpart A for the point source submission requirements. Key requirements for your attention include:

- The data fields required by the AERR are provided in Table 2a and 2b to Appendix A of the AERR. The field definitions are provided in Section 51.50 of the AERR.
- The point source reporting thresholds are specified as part of Section 51.50 definition of point sources. The emissions thresholds are specified as "potential to emit" emissions (except for lead) and are lower for sources within nonattainment area boundaries for ozone, PM10, and CO nonattainment areas. The reporting threshold for lead emissions as point sources is 0.5 tons per year of actual emissions.

4.3 Inclusion of Greenhouse Gas Emissions for Point Sources

The 2014 NEI included emissions for some Greenhouse Gases (CO2, CH4 and N2O) in some data categories (on-road, non-road and events). For point sources, EIS has included an emissions data set containing the point source GHG (CO2, CH4, N2O and SF6) emissions as reported by facilities to the EPA GHG Reporting Program (GHGRP) beginning with the 2013 emission year. These GHGRP emissions were not included in the 2014 NEI v1. For the 2017 NEI, we plan to include point source emissions of those four GHGs in the published NEI. The primary source of the selected GHG data will be the direct facility reporting to the GHGRP. We will also use S/L/T reports of the same four GHGs if they have been reported for facilities which do not appear in the 2017 GHGRP data. We expect that any such S/L/T reports which are so used will be for smaller emitters of GHGs, given the reporting requirements of the GHGRP. We will use the GHGRP data preferentially over S/L/T-reported data because the GHGRP data is required of the facilities, the calculation procedures have been prescribed by regulation, and the facility-reported data is reviewed by the EPA GHGRP to be EPA's authoritative source of GHG emissions for those facilities. Note that we are not requiring S/L/Ts to report GHGs to EIS for any facilities, but we plan to include any voluntarily reported S/L/T point source data in the NEI if it appears to be valid and if we do not have any GHGRP data for that facility.

For 2017 we plan to use as a minimum the facility-level totals for each of the four GHGs. We will investigate using unit-level emissions for CO2 where they are available from the EPA CAMD emissions reporting system. We will store the facility-level non-biogenic CO2 emissions as reported to the GHGRP, along with the CH4, N2O, and SF6 emissions. Biogenic CO2, which is reported as a separate element to the GHGRP, will not be included in EIS or the NEI. As with the earlier years, we will convert the values as published on the GHG Reporting Program Data Sets website from CO2-equivalent mass to actual mass, for consistency with the rest of the NEI and its applications. The conversion factors used for 2014 were obtained from Table 1 of the IPCC's Fourth Assessment Report (25 for methane, 298 for nitrous oxide, 22,800 for sulfur hexafluoride), per the documentation given on the GHG Reporting Program web page.

A crosswalk of which GHG facility IDs correspond to which EIS Facility IDs for the purposes of writing the GHGRP emissions values into EIS is available in EIS. The GHGRP facility IDs are stored as Alternate Facility IDs for each EIS facility. These Alternate Facility IDs can be seen on the EIS Gateway screens for a particular facility, or a bulk report can be obtained from EIS by using the Facility Configuration reports, Alternate Facility IDs, and filtering for Program System Code = "EPAGHG". The 2014 GHGRP facility summary file contained 7289 facilities as identified by the GHG Facility ID. Of those 7289 GHG facilities, 5396 have been matched to EIS facility IDs. In some cases, more than one GHG facility was matched to a single EIS facility ID. In those cases, the sum of the multiple GHG facilities will be written to the EIS facility. Based on the 2014 reporting year, 95 percent of the total CO2 reported to the GHGRP is matched and stored to an EIS facility.

We will review the 2017 GHGRP facility summary file when it is available to update the EIS crosswalk for any additional facilities that can be matched with reasonable certainty. We do not plan to add GHGRP facilities that cannot be readily matched as new EIS facilities, based upon the limited additional GHG emissions that would be accounted for by these facilities and the increasing possibility that the facility may be accounted for in EIS in some fashion by S/L emissions submittals, whether as point, non-point, or non-road sources.

Based upon the 2014 datasets it appears that the largest reporters of CO2-equivalent that cannot be found in EIS are underground coal mines. These sources can emit enough methane to surpass the GHGRP minimum thresholds without having much criteria air pollutant emissions. We do not plan to attempt to calculate GHG emissions for EIS facilities where we have neither a GHGRP value nor a S/L/T value. While combustion CO2 emissions might be reasonably estimated if provided a valid annual fuel throughput, we do not believe that the EIS-reported fuel throughputs should be relied upon without significant new QA review, particularly for the smaller combustion sources that would not already be matched to a GHGRP facility. An augmentation of CO2 or CH4 emissions based upon a ratio to NOx, CO, or other EIS-reported criteria emissions would likely be extremely uncertain given how much larger CO2 emissions would be than the criteria pollutants and how variable the ratios might be given the sensitivity of the criteria pollutants to controls or operational parameters.

We will look for S/L/T reported facilities with NOx emissions greater than some threshold where we would expect a GHGRP value but none is available. EPA will contact the SLT for these occurrences to confirm whether the NOX values are correct.

EPA will not be adding any CO2 emissions values not reported by either the facility directly to the GHGRP or by the SLTs to EIS. Note that the reporting of any GHGs by SLTs to the EIS is not intended to supplant the required reporting by facilities, and SLTs are not required to use the GHGRP protocols if they choose to report values to the EIS. SLTs should not report GHGs to EIS if they are concerned about them appearing in the NEI. Any facility-reported GHG values to the GHGRP will be used preferentially before any SLT-reported values to the EIS.

4.4 Source characterization of fugitive sources

The following clarifications on how we characterize fugitive emission release point angles and dimensions are offered. This set of instructions are used to improve air dispersion modeling in support of the National Air Toxics Assessment (NATA). The QA check that restricts the fugitive angle measure, EIS variable "Fugitive Angle (DEG)", is now limited to between zero (0) and 89 degrees of rotation, no longer

180 degrees. The lat/lon coordinates for the fugitive release point should be reported as those of the most western corner, and the angle is measured clockwise around that point from true (not magnetic) north. The "Fugitive Width (FT)" EIS variable is the measure along the side that would run in the East-West direction if the angle were 0 degrees and the "Fugitive Length (FT)" EIS variable is the measure along the side that would run North-South if the angle were 0 degrees. In the example below, the release point coordinates are located at the push pin, the length is 1897 feet, the width is 680 feet, and the angle is 22 degrees.

4.5 Point source best practices

The EPA encourages the use of the following best practices when submitting emissions of point sources.

- Collecting data from facilities:
  - Request that facilities use stack test data, material balances, or other site-specific and reliable calculation methods to estimate emissions for their processes. Where such methods are not available, facilities can use the best available emission factors for similar processes.
  - Require that facilities use the latest EIS reporting codes. Download these as described above and make them available to your facilities.
  - For HAPs, encourage facilities to compare their HAP submissions to what has been submitted to TRI. While the EPA prefers the HAP emissions for the NEI because it is at a more detailed process level, the facility-level TRI data and State-reported process-level data should sum to the same values.
- Building your inventory:
  - Use consistent identification codes from one year to the next (e.g., facility, unit, release point, and process identifiers). This prevents the creation of duplicate facilities or sub-facility records, which reduces the potential for double-counted emissions to be introduced either in State-reported data or due to the use of TRI augmented values. If

needed, work with your information technology department to identify ID changes that have been made in your data system and update your agency IDS in EIS.
    - Provide control information whenever possible, making sure that it is complete. The control data are required by the AERR (when controls are present), and the EPA uses the control data to assess future possible controls as a demonstration of whether and how future NAAQS can be attained.
    - Use the expected pollutants list (see Section 3.3) to help prioritize your efforts and QA.
- Reporting best practices:
    - Plan to start your submission process at least 4-8 weeks prior to the deadline, accounting for time away from the office for holidays.
    - If possible, submit the facility inventory data for only those facilities or parts of facilities that have changed since the previous time the facility inventory data were provided.
    - Make sure to also submit updates to the "Operating Status Code" for facilities that are no longer operating or no longer required to report as point sources. This will impact your completeness report since facilities which have a Facility Site Status Code of OP (Operating) that have not submitted emissions will be counted as incomplete.
    - Submit data to the EIS QA Environment prior to submitting data to the Production Environment. Make sure your feedback reports are clean prior to submitting to the Production Environment.
    - Verify that the emission totals in EIS agree with what you have in your agency's data system after submission to EIS Production (see Appendix 1)
    - Run the completeness report and update your submission to meet or exceed all completeness criteria.

4.6 Mercury and Air Toxics Standard (MATS) Data

For the 2014 NEI the EPA made available via the 2014 NEI Documentation website the average emission factors developed from the MATs testing done for several HAPs at electric generating units (EGUs). We made available our assignment of those bin-average emission factors to each of the EGUs covered by the MATs rule for consideration by the SLTs in their review for the best estimation method available for their facilities. The MATS testing was performed in 2010 and covered mercury, lead, several other metals, and HCl and HF acid gases. The assignments of the averaged emission factors to individual units was reviewed and revised by the EPA for the 2011 NEI, based on controls believed to be in place at that time.

The EPA encourages SLTs to review whether the MATs-based emission factors are still applicable to the units in their jurisdiction, and to use those emission factors unless they have more recent site-specific data on which to base an emission estimate. The EPA believes the MATs-based emission factors are more representative of emissions from these units than the published AP-42 emission factors or metal content equations. SLTs should also be aware that CEMs for many coal-fired units have been installed and are reporting hourly emission rates to EPA's Clean Air Market Division beginning in 2015. The EPA will use the CEM values or the MATs emissions factors and reported heat inputs for 2017 to make estimates of the emissions for these units. These estimates will be compared to the SLT-reported values to identify any large discrepancies which may need resolution.

Please indicate your review and evaluation of the most current emission factor materials for these units by using the emissions calculation method code "9" or "10" if you are using one of these bin-average emission factors. The EPA will interpret emission calculation method code "8" (USEPA Emission Factor)

to mean that you are using the outdated published AP-42 emission factor for these units. Whether you use the MATS emission factor or your own site-specific assessment, please also fill in the emission factor field and its associated numerator and denominator fields.

5 Nonpoint sources

5.1 Overview

Air agency nonpoint source data is an important source of data in the NEI, particularly for those nonpoint categories that have overlap with point sources. Nonpoint sources include (but are not limited to) fuel combustion categories; oil and gas production; industrial, commercial and consumer solvents; residential wood combustion; road and construction dust; and agricultural emissions sources. The EPA provides a large number of spreadsheets and database tools intended to be used by SLT agencies to aid in the calculation of their nonpoint emissions, though the use of the EPA tools is not a requirement. The following subsections provide a road map to the requirements from the AERR and the best practices for submitted data. Additional subsections provide specific information on an updated nonpoint source-specific process using a category survey for the 2017 NEI.

As in past NEI cycles, the EPA intends to augment state nonpoint source emissions when needed. The nonpoint tools that EPA develop also serve a secondary purpose: to provide fallback data for the EPA to use where SLTs do not submit adequate data to the inventory. Further, augmentation of SLT data also includes PM augmentation, HAP augmentation (factors to ratio HAPs from CAPs), and chromium speciation.

5.2 AERR requirements

Please refer to 40 CFR Part 51, Subpart A for the nonpoint source submission requirements. Key requirements for your attention include:

- The data fields required by the AERR are provided in Table 2b to Appendix A. While EIS does not enforce the reporting of all required data fields, air agencies are legally obligated to report the required fields. The field definitions are provided in Section 51.50 of the AERR.
- Obtain the latest reporting codes from EIS prior to compiling nonpoint source data. In particular, for the 2017 NEI cycle, some codes have changes (see Section 3.2).

For the 2017 NEI, as detailed in Section 2, we are extending the SLT submittal deadline certain “Category 3” nonpoint sources to May 31, 2019 if submitting activity inputs and March 31, 2019 is submitting emissions, well beyond the January 15, 2019 extended-AERR deadline for all other NEI sources and data categories. We believe the extended deadline for these Category 3 sources will allow for improved estimates via more accurate point source subtraction and more updated activity data.

5.3 Nonpoint source best practices

The EPA encourages the use of the following best practices when submitting emissions of nonpoint sources.

- EPA’s nonpoint emissions tools:
    - EPA encourages SLT agency staff to participate in the review and development of the nonpoint emissions tools, datasets, and Nonpoint Emissions Methodology and Operator Instructions (NEMO). The EPA will be continuing Nonpoint Method Advisory (NOMAD)

workgroups focused on method improvements and documentation in the tools, including the request for SLT-submitted activity data where available.
    - After the tools or datasets are released, the EPA encourages states to review the available documentation and use the tools to estimate their emissions. Alternatively, if no changes are needed to these EPA defaults, SLT air agencies can indicate to EPA (through the survey response) their interest in accepting the EPA defaults as their NEI emissions estimate.
- Provide an accurate and timely nonpoint survey response.
- Building your inventory:
    - Provide control information whenever possible, making sure that it is complete. The control program data are required by the AERR (when control programs are present), and EPA uses the control data to assess future possible controls as a demonstration of whether and how future NAAQS can be attained.
    - Use the expected pollutants list (see Section 3.3) to help ensure complete coverage and reduce mixing of EPA and SLT-submitted data where possible.
    - Use the information provided to EPA in the 2017 nonpoint survey (see Section 5.4.4) to make sure to report those categories that you indicated you have in your state.
    - Focus on categories that require point/nonpoint reconciliation since the EPA cannot do this reconciliation without state input. These efforts will help prevent missing emissions or double counting of emissions.
- Reporting best practices:
    - Plan to start your submission process at least 4-8 weeks prior to the deadlines for each data category (see Section 5.4.1), accounting for time away from the office for holidays.
    - When submitting emissions, submit data to the EIS QA Environment prior to submitting data to the Production Environment. Make sure your feedback reports are clean prior to submitting to the Production Environment.
    - QA your data after submission to Production (Appendix 1)
    - Run the completeness report and update your submission to meet or exceed all completeness criteria.

5.4 Nonpoint process changes for 2017

The 2017 nonpoint data category will be complied in a much different manner than the 2014 NEI. We are staggering the schedule for EPA estimates development and review. We are also going to utilize an EIS feature called Option Group/Option Set. The purpose of this enhancement is to minimize the need for "tagging" out data that would otherwise lead to double-counting, automating the process of selecting data based on overlapping SCCs. EPA hopes that utilizing this process will greatly simplify the nonpoint survey, both in the number of questions an SLT needs to answer as well as EPA's interpretation of the results.

5.4.1 New staggered schedule for submissions

One of the biggest challenges with the nonpoint data category has been managing the release of the "final" EPA estimates (and tools). For the 2017 NEI, EPA has decided to divide the tools into three categories on differing schedules. This will allow for EPA and the NOMAD Committee to spend the greatest resources and most time on the most important and complicated tools. This staggered schedule will allow more focus on specific nonpoint tools in discrete timeframes during the 2017 NEI

development cycle, and will avoid dumping an overwhelming number of new and revised EPA estimates at once on the SLT inventory developers. The three categories are defined as:

> **Category 1.** Sources that do not require point inventory reconciliation (subtraction) and where the existing methodology is expected to have minimal changes, and thus, extensive additional resource investment is less important than other sources. In general, any updated activity data between a draft and final NEI would have minimal effect on the resulting emissions, and therefore, these tools can be finalized earlier in the NEI process. EPA will release these tools for comment and finalize them first in the succession of the 3 categories.
>
> **Category 2.** Sources that do not require point inventory reconciliation, but where the existing methodology is in need of updates, and thus, more extensive collaboration with SLTs on methodology and tools are needed than Category 1 tools. Many of these tools have undergone recent significant methodology changes in the 2014 NEI cycle, or are expected to undergo significant revisions for the 2017 NEI via coordination with targeted NOMAD subcommittees. EPA will release these tools for comment after Category 1 tools, but prior to Category 3 tool development.
>
> **Category 3.** Sources that require point inventory reconciliation. These tools are last in the staggered schedule because, while methodology can be locked in prior to NEI development, properly subtracting point data generally must wait until the 2017 point data (activity or emissions depending on the tool) are available. These tools will be pre-populated with latest available activity/emissions data to facilitate methodology and draft estimate review prior to the 2017 point NEI being made available. The tools will then be finalized after the 2017 point NEI data are successfully loaded.

<u>Nonpoint Inputs vs emissions submittal options</u>

It is important to note that EPA will accept SLT inputs for these tools on this staggered schedule, similar in time deadlines to emissions submittals for all non-Category 3 tools: January 15, 2019. Category 3 inputs are due by May 31, 2019; however, if SLTs do not wish to have EPA process Category 3 tools, they can submit emissions for Category 3 tools, but by an earlier deadline: March 31, 2019.

SLTs are also able to run the final V1 tools and/or submit their own estimates by the extended AERR-based deadline, January 15th 2019. EPA will provide the templates for activity input submissions. EPA will likely use a SharePoint directory, shared w/ SLT submitters, to record nonpoint input submittals. EPA will likely create a spreadsheet in this yet-to-be-created directory to summarize the SLTs that submit and the types of inputs submitted. The exact format will be determined via NOMAD calls in the coming months.

The following is the schedule for all NEMOs, including interim milestones of draft tool/estimates release, SLT comment period deadline, Version 1 tool tool/estimate release, and final NEI estimates:

Category 1 NEMO Tools/Estimates	EPA Tool or Stand-alone Database?	EPA posts draft tool/ estimates	SLT comments due	EPA V1 NEMOs posted	V1 tools Finalized
Milestone Goals		3/31/2017	5/31/2017	8/31/2017	1/31/2018
Ag Pesticides	Tool	Y	Y		
Ag Tilling	Tool	Y	Y		
Asphalt Paving	Tool	Y	Y		
Aviation Gas Distribution Stage 1	Tool	Y	Y		
Aviation Gas Distribution Stage 2	Tool	Y	Y		
Composting	Tool	Y	Y		
Construction Dust: Residential	Tool	Y	Y		
Construction Dust: Non-Residential	Tool	Y	Y		
Construction Dust: Road	Tool	Y	Y		
Mining & Quarrying	Tool	Y	Y		
Open Burning: Land Clearing Debris	Tool	Y	Y		
Open Burning: Municipal Solid Waste	Tool	Y	Y		
Open Burning: Yard Waste	Tool	Y	Y		
Residential Charcoal Grilling	Tool	Y	Y		
Residential Heating -Non-wood	Tool	Y	Y		
Category 2 NEMO Tools/Estimates	**EPA Tool or Stand-alone Database?**	**EPA posts draft tool/ estimates**	**SLT comments due**	**EPA V1 NEMOs posted**	**V1 tools Finalized**
Milestone Goals		2/28/2018	4/15/2018	7/31/2018	9/30/2018
Ag Dust (from hooves)	Tool				
Ag Fertilizer	database				
Ag Livestock	database				
Ag Fires, including rangeland	database				
Ag Silage	TBD -New for 2017				
Biogenics	database				
Commercial Cooking	Tool				
Human Cremation (non-Hg)	Tool				
Nonpoint Mercury (inc. human cremation)	Tool				
Portable Fuel Containers	database				
Publicly-Owned Treatment Works (POTWs)	Tool				
Residential Wood Combustion	Tool				
Road Dust: Paved and Unpaved	Tool				
Commercial Marine Vessels	database				
Locomotives	database				

Category 3 NEMO Tools/Estimates	EPA Tool or Stand-alone Database?	EPA posts draft tool/ estimates	SLT comments due	EPA V1 NEMOs posted	V1 tools Finalized
Milestone Goals		8/31/2018	11/30/2018	2/28/2019	8/31/2019
ICI Fuel Combustion	Tool				
Oil and Gas Production & Exploration	Tool				
Solvents	Tool				
Stage 1 Gasoline Distribution	Tool				

5.4.2 New SCCs, proposed retirements, and proposed un-retirements

Analysis of the 2014 NEI, EPA and SLT-submitted data and all active and retired nonpoint SCCs identified several issues with the list of active SCCs. Appendix 2 contains a complete list of all SCCs that we will retire, new SCCs needed, and SCCs that are currently retired but should be made active again.

Reasons for retiring SCCs vary but include, but are not restricted to:

- Consistency where similar SCCs have already been retired. For example, Industrial Fuel Combustion, Natural Gas "All IC Engine Types" is already retired, but "All Boiler Types" is currently active, along with the general "Total: Boilers and IC Engines". We propose retiring "All Boiler Types". Other examples are various solvent types in lieu of "Total: All Solvent Types"; no SLT submitted emissions for most of these SCCs in 2014.
- Remove possibility for double-counting. Too many overly-specific options for some source categories, or conversely, overly-broad "catch-all" SCC descriptions can make automated reconciliation of EPA and SLT data difficult to QA. Examples of overly-broad SCCs abound, including Oil and Gas "All Processes: Total: All Processes" -in this case, should all SLT and EPA data for all other oil and gas SCCs be considered a double-count?
- If there are instances where we have an SCC that neither EPA uses nor any SLTs.

New SCCs are needed for several reasons:

- For sectors like agricultural livestock and fertilizer application, where EPA utilizes offline models to create aggregate emissions -by animal type for livestock and a "bidirectional flux" model for fertilizer application. For example, EPA estimates for livestock waste, beef (and all other model-based animals) are currently assigned to a "Not Elsewhere Classified" SCC because a beef "Total" All Processes" does not exist.
- Similarly, where we do not have a "Total", SLTs appear to be assigning emissions to a specific SCC and EPA emissions for other specific SCCs are used. We suspect this is happening in sectors like Commercial Cooking.
- Where new sources are being estimated. Examples include dust kicked up by hooves and feet for various animal types and agricultural silage. One of the new sources that we are considering adding under Ag livestock is silage emissions. These emissions (primarily VOCs, and for the 2017 NEI, we intend to only estimate VOC and associated VOC HAPs) occur mostly at dairy farms, where silos are used to store grain used as feed for livestock. While there are some methods in the literature (for California) that we can consider, how to apply it to the entire US will be a challenging, considering the activity data available for the entire nation. We have been made

aware of a USDA National Agricultural Statistics Service (NASS) “corn silage” database that includes silage production for every state and will look into this source. We will continue to work with SLTs to better understand and potentially inventory this source in the 2017 nonpoint NEI, using a new yet-to-be-created SCC.

We plan to un-retire a few SCCs because we’ve identified new methods for estimating emissions at these specific SCC descriptions, or, SLTs have requested the ability to use these SCCs.

5.4.3 Utilization of EIS Option Group/Option Set feature to compile NEI

The EIS has an Option Group/Option Set (OG/OS) feature that we will implement for the 2017 nonpoint NEI. The Option Group (OG) is a general category name for grouping of “like” SCCs (e.g., Distillate-fuel Industrial boilers/engines). The Option Group covers a group of two or more nonpoint SCCs where potential double-counts can exist. Not all nonpoint SCCs will be assigned to an Option Group.

The Option Set (OS) defines how each SCC within an Option Group relates to each other, and is the hierarchy for selecting emissions within that Option Group, where, if emissions are reported for all SCCs, some emissions will be removed from the NEI to prevent potential double-counting.

Option Set is assigned a value of <XnY> where:

- X = “Level-1” category, mandatory when OG is populated. Expected values of “A”, “B”, “C”, etc., with “A” being highest in hierarchy
- n = “Level-2” identifier, an optional subgroup of Level-1 category (X). Expected values of “1”, ,“2”, “3”, etc.
- Y = “Level-2 ranking”, optional hierarchal values if Level-2 identifier assigned. Expected values of “A”, “B”, “C”, etc., with “A” being highest in hierarchy

Any Level -1 Category “A” assignment(s) will outrank any Level-1 Category “B” grouping, regardless of the length. Within a given Level-1 Category, those with only 1 character will outrank any grouping that has more than 1 character. All Level-2 identifiers within the same Level-1 Category will be have equal ranking. Within a Level-2 Identifier set, the Level-2 Ranking will be based alphabetically, with “A” being the highest value and “Z” being the lowest value. Only the highest ranking values within the set is chosen for the selection.

Multiple SCCs may have the same ranking values, and all values with the same ranking will be selected

A simple example of an Option Group would be Distillate Oil from Industrial Fuel Combustion (leading SCC description “Stationary Source Fuel Combustion: Industrial: Distillate Oil:”):

Option Group	Option Set	SCC	Description
Ind_Dist_ICI	A	2102004000	Total: Boilers and IC Engines
Ind_Dist_ICI	B	2102004001	All Boiler Types
Ind_Dist_ICI	B	2102004002	All IC Engine Types

In this case, if an agency reports emissions for all 3 SCCs, only emissions from Option Set = ”A” are used. We can, and do, assign Option Sets where specific SCCs are given preference over the more general SCCs as well (e.g., multiple “A” OS assignments). A proposed list of OG/OS assignments for all nonpoint data

category SCCs is provided in the "Appendix 4 - 2017 Nonpoint Proposed OptionGroup-OptionSet" workbook on the 2017 National Emissions Inventory Documentation website.

5.4.4 Revised nonpoint survey

Because each agency has their own universe of sources and inventory development approaches, each agency reports nonpoint estimates a little differently. The nonpoint survey will gather information specifically for each SLT regarding which source categories are covered by point, nonpoint, or both, and about where point source reconciliation needs to be done to nonpoint activity. The survey allows us to determine what it means when a SCC is missing from an SLT submittal. It could mean one of three scenarios: 1) the agency accepts EPA data, 2) the agency covers that source in the point data category, or 3) that those sources/processes are not present in that agency's locale.

The nonpoint survey was first implemented in 2014, but will be greatly simplified for the 2017 submittal process. Implementing the previously discussed OG/OS feature will automate how EPA data are used to gap fill SLT submittals. One of the primary purposes of the nonpoint survey in 2014 was to prevent EPA double-counting emissions in sectors where SLTs and EPA report emissions for different SCCs but for similar processes. A draft version of the new nonpoint survey will be released in January 2018, months before the nonpoint submittal window opens. EPA anticipates finalizing the nonpoint survey before the SLT submittal window opens in June 2018. At this time, EPA expects that the nonpoint survey will be reduced to the following question for each SCC where EPA generates estimates:

Do you want to use EPA estimates for this SCC?

- No: We have this source and will submit data; We do not have this source; or, We completely cover this source in the Point inventory
- Yes

The nonpoint survey will default to "yes" for all sources except for "Industrial and Commercial/Institutional Fuel Combustion" (ICI), which will default to "no". This has the following consequences:

- If SLTs do nothing in the nonpoint survey, EPA estimates will be used where computed ***and where SLTs do not submit emissions in that Option Group***. For example, if you submit some type of woodstoves with inserts (EPA SCC or not), your SLT emissions will be used and EPA emissions will not; however, if you neglect to submit any emissions for this Option Group, EPA estimates ***will*** be used (gap fill). This is an important distinction: if you submit emissions for an Option group, they will be in the NEI unless you actively remove them from your data, or contact EPA prior to the submittal deadline to request EPA remove ("tag-out") your data. For QA reasons, EPA prefers less tagging than necessary.
- If you indicate "no" in the nonpoint survey, EPA emissions will not appear in the NEI for the Option Group. You must select one of the 3 reasons for not accepting EPA estimates. (SLT estimates, it doesn't exist in nonpoint, or it doesn't exist in geographical agency location.)
- The survey response will default to "no" in the nonpoint survey for ICI because:
  - We expect you to submit emissions using point subtraction from SLT submittals and
  - We expect nonpoint emissions for virtually every county for many fuels/sectors unless SLT performed point source subtraction that resulted in zero nonpoint emissions.

6 Mobile sources

6.1 Overview

Mobile sources are sources of pollution caused by vehicles transporting goods or people (e.g., highway vehicles, aircraft, rail, and marine vessels) and other nonroad engines and equipment, such as lawn and garden equipment, construction equipment, engines used in recreational activities, and portable industrial, commercial, and agricultural engines.

The EPA creates a comprehensive set of mobile source emissions data for criteria, hazardous air pollutants, and greenhouse gasses for all states, Puerto Rico, and U.S. Virgin Islands as a starting point of the NEI. The EPA uses models to estimate emissions for most of the mobile source categories. With the exception of California, the EPA requires SLT agencies to submit MOVES model inputs where applicable, rather than emissions, so that the EPA can use those inputs if MOVES is updated and for consistent future year mobile source projections.

6.2 AERR requirements

For onroad and nonroad, state and local agencies are required to submit MOVES model county data bases (CDB) inputs. They may choose to submit emissions in addition. The exceptions are tribes and California, who may submit emissions only.

6.3 Mobile source best practices

The EPA encourages the following best practices when submitting onroad/nonroad mobile data:

- Look for and follow posted directions on how to submit mobile inputs. Inputs are required for all sources in MOVES: all onroad vehicles and nonroad equipment.
- Submit both the required input data, and any supplemental documentation, to help support and explain your input information. The EPA will provide instructions regarding how to provide any supplemental documentation prior to the June 2018 opening of the EIS submission window.

6.4 Onroad process changes for 2017

The EPA will continue to use MOVES for the 2017 NEI for both onroad and nonroad emissions, the exact version will be determined prior to the submittal window opening in June 2018.

Collection of inputs, rather than emissions, is required to provide EPA the ability to run varying model scenarios and future projections from the same input basis. Model input data collection will be like the process used for the 2014 NEI. The EPA is interested in comments on the current MOVES input process in planning improvements for the 2017 NEI cycle.

6.5 Nonroad inputs

For the 2017 inventory cycle and beyond, only MOVES input format (CDB) will be accepted.

6.6 Commercial marine vessels changes

As with the 2014 NEI, the EPA will post shape-fraction files to aid agencies that have CMV emissions at the county-level and wish to allocate them to shapes based on EPA's values. If SLTs have more detail than EPA's shapes, they may contact us to update the shape files to include new ones.

6.7 Rails changes

For the 2017 inventory cycle, we will return to county-based processes for in-line rail emissions, dropping the use of shape IDs. Rail yards will still be at the facility-level.

6.8 Aircraft changes

For the 2017 inventory cycle, we are using the same methodology as used for the 2014 NEI. We will collect landing and take-off inputs, then run the Federal Aviation Administration's model to estimate emissions. For 2017NEI, we will use the newer Aviation Environmental Design Tool (AEDT) for EPA estimates.

7 Events

7.1 Overview

As proposed, the revised AERR does not require SLT agencies to report emissions from wildfire or prescribed burning (wildland fires) sources. These sources are reported as events to EIS. Thus, for the purposes of this plan, the approaches described here assume use of the event format and voluntary participation from SLT agencies to help EPA to create the most accurate inventory of these sources. We actually encourage states to submit inputs and not emissions for Events.

Air agency EVENT (day-specific emissions from wildfire and prescribed burning sources) data is an important source of data in the NEI, as many pollutants such as PM, VOCs and numerous HAPs are emitted in significant amounts by the large fires. For EVENTS, the EPA provides a default dataset that covers the entire U.S. States should carefully check these emissions and strongly consider accepting them before making a decision to submit emissions on their own. The EPA prefers to use consistent methods and pollutants where possible, so working with EPA to have the best estimates possible and then accepting EPA's estimates are an ideal approach. After review of EPA's final EVENT emissions (after provision of activity data), if an Agency deems it absolutely necessary to submit emissions, then care must be exercised to keep the pollutant coverage the same as what EPA estimates using its methods. More details on the inventory development for wildland fires is provided here.

Reassembly of the Fires Workgroup

We will hold calls on a periodic basis to understand EPA methods, get work group comments and suggestions, and incorporate comments to the best of our ability into our estimation process. We will also include agricultural fires (which is currently in nonpoint and is discussed in the NOMAD WG) in these discussions.

Solicitation of 2017 Activity Data

EPA will send a request by email to all SLTs to collect activity data for wildland fires. These activity data include, but are not limited to inputs such as: acres burned, fuel moisture, fuel consumption and type of fires. EPA will provide an Excel-based template for SLTs to populate and return to EPA.

Memo to SLTs on EVENTS process for 2017

EPA will send a memo briefly explaining EPA methods and why EPA would prefer SLTs and others to only submit activity data for wildland fires, and not emissions. In addition, if an SLT will submit emissions, we will explain what needs to be submitted (including CAPs, HAPs, and GHGs) including parameters needed for emissions modeling such as the heat released by each fire and its unit of measure and how one can estimate that value.

Questionnaire to SLTs

Concurrent with the memo to SLTs on EVENTS process, EPA will send a questionnaire to SLTs to help EPA assess how complete their activity data is. This will help EPA appropriate use other datasets in conjunction with what the SLTs submit.

EPA Communication back to SLTs

EPA will provide feedback to SLTs that submitted activity data as to the quality of the submitted activity data and if/how those data can use in emissions processing. EPA will further use questionnaire results to ensure SLTs are agreeable to bringing in new activity datasets that are available as default for their domains.

Create SMARTFIRE2-based draft emission estimates and SLT review

Activity data agreed upon to for use by SLTs for their areas will be used with or without other activity datasets to estimate emissions via the SMARTFIRE2 (Satellite Mapping Automated Reanalysis Tool for Fire Incident Reconciliation) (SF2) approach that has been used for previous inventories. For those SLTs that did not submit activity data, default activity data will be used. Draft methodology will also be provided and request SLTs provide comments for corrections, including revised activity data they may possess.

Rerun SMARTFIRE2 with revisions

A regeneration of emissions based on suggested revisions from the review process will be performed as resources allow. Accompanying documentation outlining differences between the draft estimates and this rerun will be provided. SLTs that do not comment should see no changes in emissions.

Finalizing Wildland fires inventory

SLTs will be able to review the SMARTFIRE2 rerun emissions and minor comments or edits will be addressed and reflected in the Final NEI. Any SLTs that do approve of the EPA estimates need to have submitted their emissions prior to the extended-AERR deadline -though we strongly discourage this for wildland fires. For those SLTs that submit emissions, EPA will provide HAP and PM2.5 composition emission factors for SLTs to use. Also, if SLTs submit emissions, they must also have submitted other parameters required for emissions modeling, such as hear released by each fire (which can be estimated from CONSUME). All required parameters will have been provided by EPA prior to the AERR submittal deadline.

7.2 Event process changes

For the 2017 NEI process, we expect the following items to be new/changed from the 2014 NEI process:

- Similar to the 2014 NEI, we continue to strongly-encourage SLTs to submit activity data and NOT emissions for this data category. While we do encourage all SLTs to submit only activity data, a couple of states do continue to submit emissions for this category.
- In the 2017 NEI, more parameters will be required if SLTs submit data (emissions) to this category, including heat content ("Heat Release" and "Heat Release UOM"—see table in section 2 for further details) for each fire as well as other parameters needed for emissions modeling of these fires; without heat release and heat release unit of measure, it is not possible to compute plume rise for fires. It's also possible that we update PAH EFs for these fires in the 2017 NEI.
- Those Agencies that decide to submit emissions data must submit smoldering and flaming emissions (the sum represents what has been required in the past (see Section 3.4)). The

smoldering and flaming components individually are important for many activities including use of data for climate assessments, because the PM2.5 chemical composition is different for the smoldering vs. the flaming component.

- We will review the possibility of including lead (Pb) as a pollutant from these large fires in the 2017 NEI. If we adopt an EPA method for Pb in the 2017 NEI, agencies that decide to submit actual emissions data should also plan on submitting Pb emissions. An emissions factor and procedure for estimating Pb emissions from PM2.5 fractions will be provided by the EPA as needed.
- SLTs that submit emissions must also submit HAPs, GHGs, and PM species as reported in EPA data for EVENTS. EPA will provide the requisite EFs.
- Agencies should make it clear to the EPA that the activity data they are submitting is a complete set for both prescribed and wild fires. In that way, the EPA will ensure no other default data is brought into the process of estimating emissions for the SLTs in question if such a note is included as part of the activity data submission. EPA will add more details on this to the plan at a later time, but it's expected we will do it via a survey administered by USFS that was sent to all SLTs that submitted activity data for the draft wildland fires inventory for the 2014 NEI.
- As discussed earlier in this plan, it's possible we introduce a new SCC for pile burns in the 2017 NEI for EVENTS. If we do that, SLTs that submit emissions must submit to that SCC to fires they consider to be pile burns. It's expected the list of pollutants will be the same for piles as for wild and prescribed fires.
- We encourage agencies to send in activity data as soon as EPA's "request for 2017 WLF activity data" note goes out. This will facilitate EPA's ability to develop a draft Events inventory for SLT review by the deadlines provided earlier. We strongly encourage all agencies to review and comment on the draft EVENTS NEI that we expect to post in early summer 2018. This includes submitting additional activity data, commenting on the draft emission estimates, and other items that will facilitate getting us to a final WLF inventory.

7.3 Event source best practices

- Submit activity data so that the EPA does not have to use default data to identify and estimate emissions from fires occurring in your domain. Important parameters include acres burned, fire perimeters, fuel loading, and fuel consumption; however, acres burned is the most important activity data to submit. The EPA relies on the default methods from satellite detections without more specific data. The importance of submitting activity data is especially true for prescribed fires, because the EPA methods have a more difficult problem in identifying which fires are prescribed fires for appropriately estimating the emissions. At this time, we expect that activity data for the 2017 NEI fires will simply be submitted via email to Tesh Rao (rao.venkatesh@epa.gov), and the EPA will provide directions if those plans change.
- Review draft NEI for EVENTS soon after it is available. Ensure that submitted activity data were used appropriately. Provide comments in the comment time period specified by the EPA.
- If an Agency decides to submit actual emissions (EPA discourages this process for EVENTS), provide documentation on the methods as much as possible either via comment fields in EIS or via an email to Tesh Rao at rao.venkatesh@epa.gov. Also, if an Agency submits emissions, ensure that the pollutant coverage is the same as what the EPA estimates using its methods. If Emission Factors are needed, please contact the EPA. If you do decide to submit emissions,

  - Submit data to the EIS QA Environment prior to submitting data to the Production Environment. Make sure your feedback reports are clean prior to submitting to the Production Environment.
  - Use the new (expected) comparison report as an additional QA step (see Section 8.3)
- Please plan on reviewing the draft estimates that will be provided by EPA and submitting appropriate comments. In addition, please work with EPA to submit and review your activity data as EPA processes them into emissions.

8 EIS Gateway, Reports, and Tools

8.1 Staging Tables

To assist in resolving Bridge Tool errors, we built queries into the staging tables that identify widows and orphans, which can prevent your data from converting to the required XML format. We updated the Bridge Tool in October of 2017 to provide error messages to be more informative.

For users of Windsor Solutions' inventory management product "SLEIS", the Bridge Tool has been adapted to convert the XML export files from SLEIS into the staging tables without prior manual manipulation. Past versions of the Bridge Tool could not convert the XML to the staging table format.

8.2 Submissions – EIS Multi-thread Approach

To prevent a backlog of submissions during peak periods, the EPA plans to create a "multi-thread" approach to the submission process within the EIS. This multithread approach will establish two submission threads, with each thread being a separate data processing pathway. With the new approach, the EIS will automatically move files larger than a pre-assigned file size limit to another thread, allowing smaller files to be processed simultaneously. Currently, larger files must be completely processed before the smaller files will be processed. This change will be in the EIS software, so the only differences users will notice is faster response times.

8.3 Reports

All reports, except Snapshots and the Smoke Flat Files, now have the ability to be customized though the "Column" filter.

A new report is now available in EIS. The new report is a comparison report that will allow you to compare any number of datasets against a single, user-specific base dataset. This could be used, for example, to compare point emissions in the NEI 2014 v2 against your agency submitted data for 2017. An additional example would be to compare your submitted data against TRI data so that you can see what facilities have reported to TRI and what is being reported by your agency. The comparison reports will provide an absolute difference, percent difference and ratio between the baseline data value and the comparison value for each dataset being compared. We encourage SLT air agencies to take advantage of this report after having made your submission as an additional QA tool.

In addition, another report will be available for assessing whether your submissions have met the 2017 NEI completeness criteria. The use of this completeness report is described in Section 3.5.

9 Conclusion and Points of Contact

The EPA has created this plan to assist SLT agencies with their own planning needs for the 2017 NEI cycle. Please direct comments on this plan to Rich Mason at mason.rich@epa.gov. The EPA recognizes

that SLT air agency staff will have many questions, ideas, and improvements that we have not addressed here, and your comments will help us improve this plan and the 2017 NEI process. Points of contact for various NEI data source categories and functions are provided on the Air Emissions Inventories Points of Contact website.