2014 NEI Plan

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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 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 (CAPs) and hazardous air pollutant (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 of air pollution.

The NEI is created based on both regulatory and technical components. The Air Emissions Reporting Rule (AERR) is the rule that requires states to submit emissions of CAP emissions and provides the framework for voluntary submission of HAP emissions. The AERR requires agencies to report all sources of emissions, except fires and biogenic sources. Open fire sources such as wildfires are encouraged but not required. Sources are divided into large groups called "data categories": stationary sources are "point" or "nonpoint" (county totals) and mobile sources are either onroad (cars and trucks driven on roads) or nonroad (locomotives, aircraft, marine, off-road vehicles and nonroad equipment such as lawn and garden equipment). 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, EIS quality assurance (QA) checks, and the Bridge Tool. 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 1st of the year that the submission window opens. For the 2014 inventory, this date is June 1, 2015. 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 June 1st, 2014, 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 your comments. The NEI team will assist you 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 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 2014 NEI Schedule is located at http://www.epa.gov/ttn/chief/net/2014inventory.html. A key change to this schedule from what was done for the 2011 NEI is that comments on the draft NEI will not be permitted to include SLT agencies submitting wholesale replacement data. The previous approach had the unintended effect of delaying the NEI release by many weeks and increasing EPA resource requirements. SLT agencies will still be able to send data corrections during a QA period. Another important change to the schedule is that a grace period for submission will extend through January 15th, 2016 to account for the challenges of meeting a December 31st deadline during the holiday season. Finally, we are including a schedule for a second version of the 2014 NEI as well as the overlapping 2015 NEI submissions, so that the EPA and SLT agencies can plan accordingly.

In the schedule, "release in EIS" means that the NEI selection has been made and the results have been made public to all EIS users for use in reports. "Public release" refers to when the data are fully transferred to the EPA website in various forms, including modeling files. The EPA makes every effort to ensure that the data included on the website and the data in EIS use the same emissions.

2.1   What are the key 2014 NEI due dates for my agency?

January 15, 2016:   Point, Nonpoint, Onroad, Nonroad and Event data are due.

June 10, 2016:   Corrections of 2014 Draft due for including in 2014 NEI v1.

February 3, 2017:   Corrections of 2014 NEI v1 due for including in 2014 NEI v2.

2.2   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 2011 NEI v1 review during early 2014. 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 submit them to the Production Environment on the SLT's behalf. This same QA and correction procedure will be used in developing the 2014 v2 as indicated in the schedule above.

2.3   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 of the data again. This process delays the NEI release, increases EPA's use of resources, and does not have a greater benefit than the correction process that we described above. This change places a lot of importance on the end of the submission grace period on January 15th. It is very important that SLTs meet this deadline.

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

In order 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. Also included in Appendix 1 are suggested QA reports to run upon completion of your production

submission. In order to take advantage of these reports, your data will need to have been submitted early enough that you can check for data quality and make adjustments to your previously submitted file.

3   General changes to the 2014 NEI process

This section provides some general changes to the 2014 NEI process that effect 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, 2015 deadline for submitting the 2014 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, 2016.

The AERR is currently between a proposed and final rule. The EPA is working to finalize the AERR by the end of June, 2014. In the meantime, states should review the proposed AERR for possible changes that will be needed for their 2014 NEI submissions. Specifically, the EPA encourages air agencies to be prepared to report lead emissions point sources as low as 0.5 tons per year of actual emissions. Additionally, as was done for the 2011 NEI cycle, the EPA encourages air agencies that use MOVES and NONROAD to report model inputs rather than emissions.

3.2   EIS Reporting Codes

1. Control Measure Codes – see Appendix 2 for details. We are proposing that 26 control measure codes be retired. The proposed list of these codes was posted to the CHIEF website in September, 2013 for SLT agency review. These changes will be implemented for the 2013 and 2014 NEI cycles.

2. SCC Changes – see Appendix 3 for details.
    a. Point – No retirements are proposed.
    b. Nonpoint – 139 SCCs are being proposed for retirement. These SCCs represent codes which are seldom used by SLTs or can cause issues with double counting emissions.
    c. Events – Two SCCs are being considered for retirement.
    d. Onroad – Changes are expected for on-road SCCs to support MOVES 2014 approaches. These SCC changes will be available in the summer of 2014; however, they do not effect states that submit model inputs to meet their 2014 NEI requirements.
    e. Nonroad – No changes are proposed.

3. Emission Methodology Codes - Event-specific codes have been added. These codes will only be available to wildfire and prescribed fire SCCs (2810001000, 2811015000, and 2811020000) when reporting emissions. The following codes are the only allowable Emission Calculation Methodology Codes permitted in the Event Inventory for the above SCCs.
    a. 40 – Emission Factor based on regional testing program
    b. 41 – Emission Factor based on data available in peer reviewed literature
    c. 42 – Emission Factor based on Fire Emission Production Simulator (FEPS)

4. Pollutant Codes - 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 what is currently used in EIS and to allow for future selections to include these data, we may make changes to the pollutant table. Discussions are currently underway on if these changes will effect states submissions. More information will be available by the end of 2014, but we hope to provide sooner to allow states to incorporate any changes into their instructions for facilities.

While the above are the extent of known retired and additional codes, new codes 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 mid-June, 2014.

3.3   Expected Pollutants

For some time, SLT agencies have requested that EPA provide a list of expected pollutants. For the 2014 NEI cycle, the EPA will provide such a list to be used for two purposes:

(1) To help air agencies prioritize which data categories and pollutants should have the greatest focus for QA given limited resources.

(2) To allow EPA staff to provide better completeness feedback on SLT data submissions (see Section 3.5).

Although only CAPs are required under the AERR, HAPs are also critical to a complete the NEI, and so HAPs will also be included in this list. Since we are gradually phasing in this process improvement to the NEI program, this list is not intended to be a comprehensive list of all categories and pollutants. Rather, the list will contain the minimally expected pollutants for key categories of importance in the 2014 NEI cycle. The reporting of all criteria pollutants for all data source categories is required by the AERR, and this list does not supersede that requirement. Rather, it will help provide air agencies a way to prioritize the data categories and pollutants in accordance with EPA priorities. Air agencies should continue to report all pollutants as they have done for prior NEI cycles and in accordance with the AERR, using this list as a way to help prioritize limited resources.

If your agency only submits CAPs, EPA staff will add estimates of HAPs to these categories (where specified) in the absence of your agency's HAP data. Your data submittal will not be considered "incomplete" if you do not voluntarily report HAP emissions, but it will be augmented with EPA estimates of HAPs from this list using EPA data augmentation procedures.

The list of expected pollutants should be available on the CHIEF website by the beginning of September, 2014 for point, nonpoint and event data categories. Onroad and nonroad expected pollutants are the CAPs and HAPs generated by the MOVES 2014 and the National Mobile Inventory Model (NMIM).

3.4   EIS QA Checks

The following QA changes are being proposed for the 2014 NEI cycle.

1. **Add six additional critical QA checks for particulate matter (PM) emissions values.** These checks are being added to reduce the assumptions that the EPA must make when using SLT agency PM data and to lessen the need for EPA's PM augmentation procedures. The net effect of these changes will be increased use of SLT data and better overall data quality. If PM10-FIL and PM10-PRI are submitted, then PM10-PRI must be greater than or equal to PM10-FIL

a. If PM25-FIL and PM25-PRI are submitted, then PM25-PRI must be greater than or equal to PM25-FIL

b. If PM10-PRI and PM-CON are submitted, then PM10-PRI must be greater than or equal to PMCON

c. If PM25-PRI and PM-CON are submitted, then PM25-PRI must be greater than or equal to PM-CON

d. If PM10-FIL and PM25-FIL are submitted, then PM10-FIL must be greater than or equal to PM25-FIL (QA check 835)

e. If PM10-PRI and PM25-PRI are submitted, then PM10-PRI must be greater than or equal to PM25-PRI (QA check 832)

2. **Add two additional <u>warning</u> QA checks for particulate matter (PM) emissions values**. To ensure air agency data passes these QA checks, we suggest that agency QA procedures ensure PM data combinations are "equal" within a > 1 ton tolerance.

a. If PM10-FIL, PMCON and PM10-PRI are submitted, PM10-FIL + PM-CON must equal PM10-PRI If PM25-FIL, PM-CON and PM25-PRI are submitted, PM25-FIL + PM=CON must equal PM25-PRI

b. **Update Criticality** – QA Check 192, Consistency of Release Point Exit Gas Flow Rate and Velocity will be upgraded from a warning to critical. This check will only apply if the stack diameter, exit gas flow rate and exit gas velocity are reported together.

3. **Delete two QA checks for PM emissions values** (also planned for the 2013 NEI submission period). These are no longer needed with the added checks listed above.

a. QA Check 836 – If PM2.5 is reported, must have PM10

b. QA Check 837 – If there is a PM25 control pollutant there must be a PM10 control pollutant

4. **Add QA checks to compare agency-submitted data to values in new protected point source data fields (Critical)**. For the 2011 NEI cycle the site latitude and longitude fields could be locked by EPA after verifying values. For the 2014 NEI cycle, the following additional point source fields can be locked after verification and some data values in these fields may be locked when SLT agencies submit updates to their facility inventories.

a) FIPS State & County Code
b) Tribal Code
c) Facility Name
d) Location Address
e) Locality Name
f) Locality State
g) Locality ZIP

These checks will not cause an error to be reported if the data value being submitted is the same as the protected data value. These checks are also only run on production submissions; therefore, the errors will not be included in feedback from the QA environment. We are applying this same process to latitude and longitude protected data, which should reduce the number of messages under the "protected data" tab of your feedback reports. Only the data in the protected field will be rejected and other data will be accepted into EIS. When locked data do in fact need to be revised (an actual revision), SLT agency staff should contact NEI staff to resolve the discrepancy.

This change will go into effect starting with the 2013 submission period and continuing for the 2014 NEI and beyond.

5. **Update emission ranges check (Warning)** - In the past, the emission range check gave the submitter many false positives in the warning section of feedback report. The underlying ranges have been updated for the 2014 NEI cycle, and this check should produce more realistic results.

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

6. **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).

7. **Check for present Event Staging Code (Critical)** - Event Staging Code has been raised to a "critical" check, making this data field required.

8. **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.

9. **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 for specific SCCs.

3.5 EPA Completeness Feedback

As was the case for the 2011 NEI, the 2014 NEI data will be the foundation for key EPA regulatory and other analyses. Due to the importance of this inventory, the EPA will again provide completeness reports. New to the 2014 NEI cycle, the completeness reports will be available through the EIS Gateways 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 2014 NEI version 1, letters based on the final completeness reports will also be provided to state and local Air Directors.

Additionally, the EPA has added additional completeness criteria for the 2014 NEI cycle. These 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 on the EIS Gateway.

Nonpoint:

1. Completion of a nonpoint survey (see Section 5.4.1).
    a. This survey will include the request for total point activity data at the county level for Industrial/Commercial/Institutional (ICI) combustion sources for each fuel type. We expect that these data will allow us to improve our point/nonpoint reconciliation process for boilers. We hope that this approach will reduce burden on SLT agencies to report point source total activities rather than perform the ICI combustion reconciliation themselves. This approach is an experiment for the 2014 NEI cycle.
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. 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 letter 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. Report expected SCCs as indicated in nonpoint survey.
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	100%	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 2014 NEI, including how the EPA intends to use emission factors from the Mercury and Air Toxics Standards (MATS) and an emission factors compendium.

As in past NEI cycles, the EPA intends to augment state point source emissions when needed. In past cycles, the augmentation has included PM augmentation, HAP augmentation (factors to ratio HAPs from CAPs), chromium speciation, and including emissions from 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 to Appendix A of the AERR. 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.
- The point source reporting thresholds specified as part of Section 51.50 definition of point sources. The emissions thresholds are specified as "potential to emit" emissions and are lower for sources within nonattainment area boundaries for ozone, PM_{10}, and CO nonattainment areas. As noted above, the proposed AERR revision was to lower the reporting threshold for lead, though the EPA has received a number of comments on this proposal. The EPA encourages states to be prepared to submit to EPA at least those sources as low as 0.5 tons/year of actual lead emissions.
- Obtain the latest reporting codes from EIS prior to compiling point source data. In particular for the 2014 NEI cycle, some codes have changes (see Section 3.2).

4.3 Point source best practices

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

- Collecting data from facilities:
  - Require or request that facilities use test data to estimate emissions for their processes. Where test data are not available, require or request facilities use the provided emission factors compendium when estimating their emissions (see Section 4.4) in lieu of Webfire factors where noted.
  - 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 the NEI 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 subsequent steps needed to remove such duplicates. If needed, work with your information technology department to update your data system to make these changes.
    - 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.
    - 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 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 the Production Environment. Make sure your feedback reports are clean prior to submitting to the Production Environment.
    - QA your data after submission to Production (see Appendix 1)
    - Run the completeness report and update your submission to meet or exceed all completeness criteria.

4.4   Point sources emission factor compendium

The EPA will make available an Emission Factor Compendium for 2014. The compendium will be a listing of all site or unit specific emission factors, or average SCC-based emission factors that are not currently available in WebFIRE. We expect to have this posted by October 2014.

4.5   Mercury and Air Toxics Standard (MATS) Data

For the 2014 NEI the EPA will make available via the CHIEF web site the average emission factors developed from the MATs testing done for several HAPs at electric generating units (EGUs). We will also make 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 emissions 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. The EPA will make estimates of these units emissions based upon the MATs emission factors and reported heat inputs for 2014. 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"** 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. These important categories include fuel combustion categories, industrial solvents, residential wood combustion, and agricultural emissions sources. The EPA provides a large number of spreadsheets and database tools to help SLT agencies calculate their nonpoint emissions, and these tools provide fallback data for the EPA to use in many cases. 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 2014 NEI.

As in past NEI cycles, the EPA intends to augment state nonpoint source emissions when needed, using the nonpoint spreadsheets and databases. In past cycles, the augmentation has also included PM augmentation, HAP augmentation (factors to ratio HAPs from CAPs), 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 2014 NEI cycle, some codes have changes (see Section 3.2).

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:
    - We encourage SLT agency staff to participate in the review and development of the nonpoint emissions spreadsheets and databases. During 2014 and 2015, the EPA will be convening workgroups focused on prioritizing which tools need to be updated and get community collaboration for improving the tools for use in the 2014 NEI.

- o After the tools are released, the EPA encourages states to 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, see Section 5.4.1) their interest in accepting the EPA defaults as their NEI emissions estimate.
- Provide an accurate and timely nonpoint survey response.
- Building your inventory:
  - o 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.
  - o Use the expected pollutants list (see Section 3.3) to help prioritize your efforts and QA.
  - o Use the information provided to EPA in the 2014 nonpoint survey (see Section 5.4.1) to make sure to report those categories that you indicated you have in your state.
  - o 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:
  - o Plan to start your submission process at least 4-8 weeks prior to the deadline, accounting for time away from the office for holidays.
  - o Submit data to the EIS QA Environment prior to submitting data the Production Environment. Make sure your feedback reports are clean prior to submitting to the Production Environment.
  - o QA your data after submission to Production (Appendix 1)
  - o Run the completeness report and update your submission to meet or exceed all completeness criteria.

5.4 Nonpoint process changes for 2014

Two process changes are planned for nonpoint sources in 2014:

5.4.1 Nonpoint category survey

Similar to our process for 2011, we plan on gathering information from states on their nonpoint estimates through a survey that is to be provided *prior* to the SLT agencies submitting emissions data. Because each state has their own universe of sources and inventory development approaches, each state reports nonpoint estimates a little differently. The survey will gather information specifically for your state 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 a state's data. It could mean the state accepts EPA data, that those sources/processes are not present in a state, or that the state uses different SCCs than the default EPA approach. In past inventory cycles, we have taken an approach of either contacting states individually (after their submissions arrive), or we have made assumptions. We believe that this new process for 2014 of gathering this information for all states early, consistently, and comprehensively will both greatly streamline the process and allow for better EPA QA of incoming state data.

5.4.2 Delayed data submission for some data categories

For nonpoint emissions, EPA staff recognizes that activity data for the current inventory year is often not available until after the NEI submission period closes. To reduce the burden on SLT agencies, we propose the following:

1. For those sectors where 2014 activity data **are available** prior to the submission deadline, submit your nonpoint data or accept EPA data by the January 15, 2016 deadline.
2. For those sectors where 2014 activity data **are not expected** to be available by the close of the 2014 v1 corrections window (in February of 2017), submit nonpoint data using the most recently available activity data or accept EPA data by the January 15, 2016 deadline. EPA estimates will consist of data which has been pulled forward from 2011 NEI v2.
3. For those sectors where 2014 activity data **will become available** after the submission window closes on January 15, 2016, SLTs may wait to estimate and submit these categories using the newer activity data. These data would be submitted during the 2014 version 1 corrections period between July 1, 2016 and February 3, 2017. In this category, EPA will use estimates which consist of data that has been pulled forward from 2011 NEI v2 for the 2014 NEI v1.

We intend that this third change will alleviate the need for SLTs to create and submit a nonpoint data file simply to meet the January 15, 2016 deadline, when SLT agency staff know they will have newer activity data in time for the 2014 v2 inventory.

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. The EPA encourages SLT agencies to submit model inputs where applicable, rather than emissions, so that the EPA can use those inputs if the mobile models are updated and for consistent future year mobile source projections.

6.2 AERR requirements

[This section on hold pending the AERR final rule]

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 strongly encouraged over emissions submittals.

- 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 2015 opening of the EIS submission window.

6.4 Onroad process changes for 2014

The EPA expects to use MOVES 2014 for the 2014 NEI for both onroad and nonroad emissions. To accommodate new model output information, the SCCs will be changed and expanded to include new categories such as new fuel types (like ethanol and electricity) and new emissions processes (like extended idling). For the NEI, we anticipate aggregating these new, expanded SCCs to include fewer SCCs in the NEI database or for reported emissions. The EPA is still working through details about these new SCCs and expect that the approach will become public in the fall of 2014 with the release of the 2011 NEI version 2.

Collection of inputs, rather than emissions, is strongly preferred in order to provide EPA the ability to run varying model scenarios and future projections from the same input basis. Model input data collection will be similar to the process used for 2008 and 2011 NEIs. The EPA is interested in comments on the current MOVES input process in planning improvements for the 2014 NEI cycle.

6.1 Nonroad equipment process changes

With the incorporation of NONROAD into MOVES 2014, the EPA has not yet decided the input format that will be used. One option is that the NMIM input format could be used. Another option is that we could require states to use the updated MOVES 2014 input format, and incorporate the submittal of those inputs into the existing process for submitting MOVES 2014 inputs. The EPA is interested in comments from the SLT agencies on this issue, which can be provided as part of the comments on this plan. We intend to provide the reporting format requirements no later than January of 2015.

6.2 Commercial marine vessels changes

As with the 2008 and 2011 NEIs, 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.

7 Events

7.1 Overview

As proposed, the revised AERR does not require SLT agencies to report emissions from wildfire or prescribed burning 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.

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.

7.2   Event process changes

For the 2014 NEI process, we expect the following items to be new/changed from the 2011 NEI process:

- Those Agencies that decide to submit 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 makeup is different for the smoldering vs. the flaming component.
- We will include lead (Pb) as a pollutant from these large fires in the 2014 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.
- 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.
- We encourage states to send in activity data beginning in January, 2015 so that we can start incorporating that data into estimating emissions for a draft version of the EVENTS inventory, which we expect will be released by the summer of 2015. The EPA will post instructions on this process on the 2014 website in December, 2014. We encourage states to submit activity data by March 30, 2015. Those agencies which cannot meet this deadline can send in their data during the comment period on the draft version from July 1, 2015 through October 30, 2015.

We strongly encourage all agencies to review and comment on the draft EVENTS NEI that we expect to post in the summer of 2015. This includes review and use of the activity data submitted by various agencies.

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 2014 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,

14

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,

- o Submit data to the EIS QA Environment prior to submitting data the Production Environment. Make sure your feedback reports are clean prior to submitting to the Production Environment.
- o 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

In order to assist you in resolving Bridge Tool errors, we will be building queries into the staging tables that will identify widows and orphans, which may be preventing your data from converting to the required XML format. We will also be working on updating the Bridge Tool error messages to be more informative. The Bridge Tool updates will be posted by March of 2015 to allow time for data conversions in advance of the 2014 NEI submission window opening.

For users of Windsor Solutions' inventory management product "SLEIS", we are adapting the Bridge Tool 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 Multithread Approach

In an effort to prevent a backlog of submissions during peak periods, the EPA plans to create a "multithread" 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

A new EIS report is being designed and will be available in time for improving the 2014 NEI process (it may be available as soon as December 2014). The new report will be 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 2011 v2 against your agency submitted data for 2014. An additional example would be to compare your submitted data against the 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 2014 NEI completeness criteria. The use of this completeness report is described in Section 3.5.

9 Conclusion

The EPA has created this plan to assist SLT agencies with their own planning needs for the 2014 NEI cycle. Please direct comments on this plan to Sally Dombrowski at dombrowski.sally@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 2014 NEI process.