US ERA ARCHIVE DOCUMENT

Onroad Input and Emissions Submittals

Laurel Driver April 17, 2012

EIS vs NEI

- Emission Inventory System (EIS)
 - Data repository for air emissions data used to create the NEI
 - Contains State, Local, Tribal and EPA submitted data
 - Can store multiple emissions values for the same unit/process
 - Can store annual, monthly, daily data (e.g., fires, events)
 - Data available via a password-protected web site
 - EIS Gateway https://eis.epa.gov/eis-system-web/welcome.html
- National Emission Inventory (NEI)
 - Snapshot in time from EIS
 - Inventory version shared with the public
 - One emissions value per process selected
 - Annual emissions values

S/L/T Reporting Requirement

- Air Emissions Reporting Rule (AERR) http://www.epa.gov/ttn/chief/aerr/
 - Complete criteria pollutant inventory every 3 years
 - All point sources (100 tpy potential to emit threshold)
 - Nonpoint Sources
 - Onroad and Nonroad sources
 - Events (wildfires and prescribed fires)
 - 2011 Emissions due 12/31/2012, EIS window opens 6/1/2012
 - Annual reporting for type A point source facilities
 - SO2, NOx, CO with potential to emit ≥ 2,500 tpy
 - VOC, PM, NH3 with potential to emit ≥ 250 tpy
 - Pb with potential to emit <u>> 5</u> tpy (to be amended to agree with Lead NAAQS level of <u>> 0.5</u> tpy)
 - HAPs are submitted voluntarily by many S/L/Ts and are encouraged as part of an integrated report

Uses of the NEI

- The NEI is one of the key inputs for :
 - Modeling of national rules
 - NAAQS reviews, CSAPR, etc
 - Non-attainment Designations
 - NATA Review toxics risk modeling
 - Trends reports and analyses

Components of the EIS

- Six different data categories
 - Facility Inventory
 - Point Emissions
 - Nonpoint Emissions
 - Onroad Emissions
 - Nonroad Emissions
 - Event Emissions (wildfires and prescribed fires)
 - No biogenic emissions, although these are part of EPA's modeling files

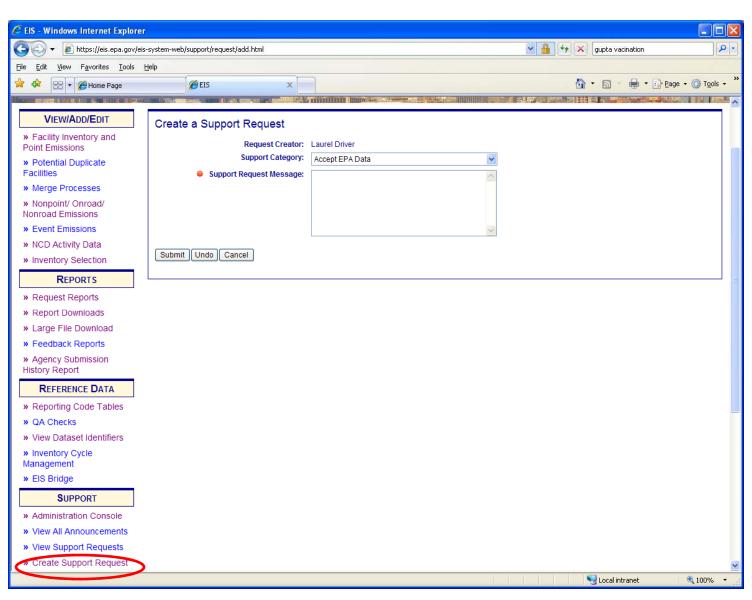
Onroad Submissions

- Emissions in NEI must be from an EPAapproved model
 - MOVES
 - EMFAC (California)
- EPA strongly encourages submittals of MOVES County Database (CDB) tables rather than emissions
- Tribes and CA should submit emissions

Why Inputs?

- EPA prefers to receive activity data instead of emissions as they allow for more in-depth analysis and consistent, integrated emissions in the NEI. If you do not submit onroad input data, EPA will generate emission estimates using national defaults.
- EPA will provide a set of default onroad inputs for agencies to review/ customize as desired
- Agencies may accept EPA defaults in lieu of submittals by sending a "support request" to EIS that states this.
- To the extent resources allow, EPA will assist agencies to build their submittals.

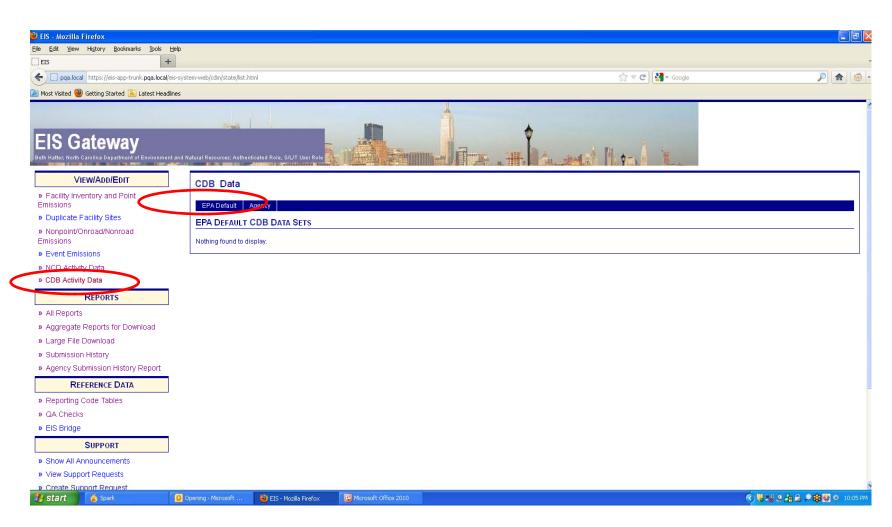
Support Request



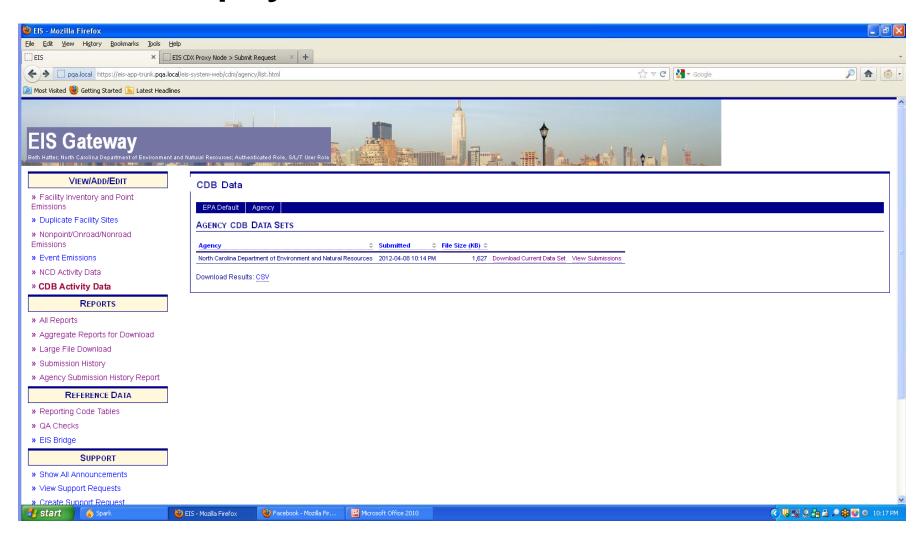
Summary of County Database (CDB) Submittal Steps

- Review instructions on the 2011 NEI web page
- Pick up your draft default CDBs from EIS
- Compile ONLY county CDBs with improvements
- Repeatedly run QA script and address errors that are found until there are no errors
- Submit:
 - 1. QA tool report
 - 2. Checklist
 - 3. Documentation
 - 4. CDB folders for each county CDB
- EACH SUBMITTAL IS A COMPLETE REPLACEMENT OF PREVIOUS SUBMITTALS!
 - Thus an agency's final submittal must include all counties they wish to submit

Pick up your draft default CDBs



Pick up your draft default CDBs



Update Inputs Compile ONLY CDBs for Counties with improvements

Table Name	Description						
countyyear	Stage 2 program description						
emissionratebyage	Alternate California standards						
sccroadtypedistribution	Distribution of SCC vehicle classes to SCC road types						
auditlog	Log of changes to the county database						
avft	Alternate diesel sales fractions						
avgspeeddistribution	Average speed distributions						
county	County description						
dayvmtfraction	Distribution of VMT to day types						
fuelformulation	Description of fuels						
fuelsupply	Market share of fuels by month						
fuelsupplyyear	Year of fuel supply						
hourvmtfraction	Distribution of VMT to hours of the day						
hpmsvtypeyear	Annual VMT by HPMS vehicle class						
imcoverage	Description of the I/M program						
monthvmtfraction	Distribution of the VMT to months of the year						
roadtype	Description of the road types						
roadtypedistribution	Distribution of the VMT to road types						
sourcetypeagedistribution	Distribution of vehicle population to vehicle age						
sourcetypeyear	Vehicle populations						
state	Description of the state						
year	Year of evaluation						
zone	Allocation of activity to zones						
zonemonthhour	Temperature and humidity values						
zoneroadtype	Allocation of vehicle operation to zones						

1. QA Report

- PSC_QA_Report.txt
- EPA will post QA tool for download prior to window opening on the 2011 NEI website. MySQL tool checks CDB in their native format
- Users can run the QA tool script on all CDBs for submittal
- The QA tool checks CDB format, naming convention, ranges, sums, etc in each CDB table
- The QA tool generates a report for inclusion with EIS submittal
- If the tool finds any errors, they must be corrected before EIS will accept them: EIS will reject any submittal with a QA report that indicates errors.

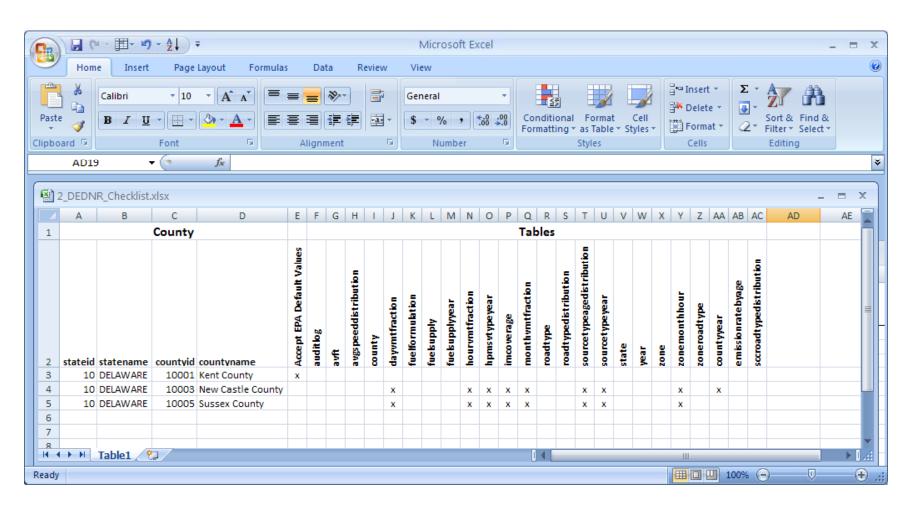
Example QA Report Results

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2. Check list

- PSC_Checklist.xls (or xlsx)
- EPA will post a checklist for download prior to window opening on the 2011 website
- The checklist indicates
 - Which tables in which counties contain updates to EPA defaults
 - For which counties agencies accept EPA defaults
- The checklist must be included in the EIS submittal

Example of Checklist



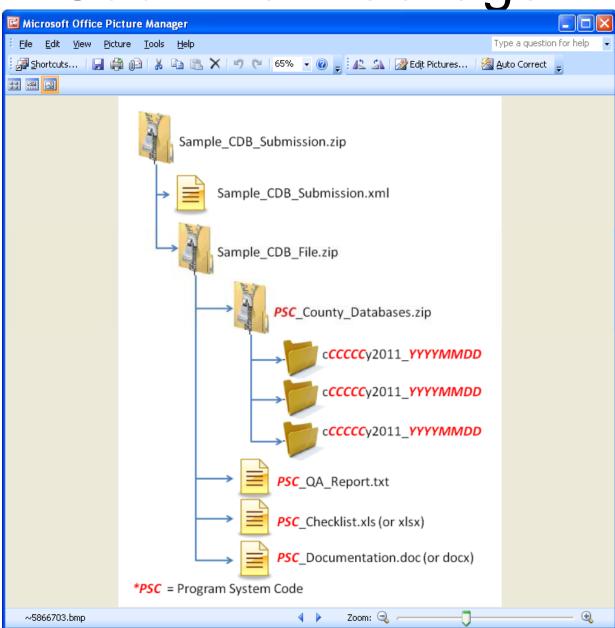
3. Documentation

- PSC_Documentation.doc (or docx)
- A word file that explains the source of SLT provided input data. A .doc or .docx file is required
- Additional supporting files of any format are optional (e.g., .pdf or .xls)

4. CDB Folders

- PSC_County_Database.zip
- Zipped file containing individual folders for each county's CDB, and labeled with a creation date in the name (example "c10001y2011_20120601."
- CDBs must include a minimum of the 24 tables listed in the summary checklist for each submitted county.
- The submitter does not need to submit CDBs for counties where he has no improvements over EPA defaults.
- There will be no representative county submittals.
- Format is the same MySQL files that MOVES uses.
- EACH CDB SUBMITTAL IS A COMPLETE REPLACEMENT OF PREVIOUS SUBMITTALS

Submittal Package



Creating XML HEADER

- 2 ways
 - Using staging tables
 - CERS and ExchangeHeader tables only -currently under revision
 - Edit XML available from 2011 NEI page

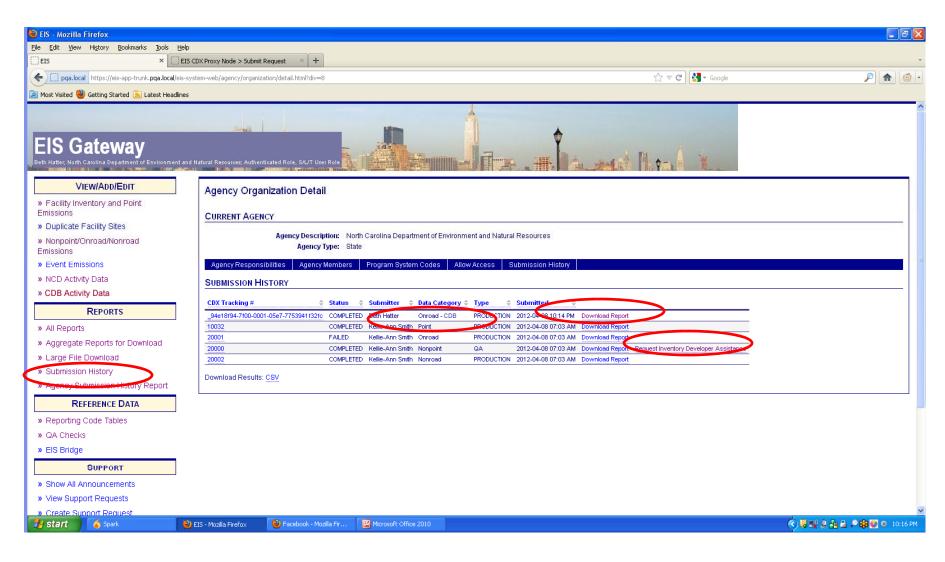
Editing XML text

```
<hd><hdr:Document id="IDxx" xmlns:hdr="http://www.exchangenetwork.net/schema/header/2" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</hd>
      xsi:schemaLocation="http://www.exchangenetwork.net/schema/header/2 http://www.exchangenetwork.net/schema/header/2/header_v2.0.xsd">
 <hdr:Header>
  <hdr:AuthorName>Your Name</hdr:AuthorName>
  <hdr:OrganizationName>Your Organization</hdr:OrganizationName>
  <hdr:DocumentTitle>EIS</hdr:DocumentTitle>
  <hdr:CreationDateTime>2012-04-10T14:02:39</hdr:CreationDateTime>
  <hdr:Keywords></hdr:Keywords>
  <hdr:Comment></hdr:Comment>
  <hdr:DataFlowName>EIS_v1_0</hdr:DataFlowName>
  <hdr:Property>
   <hdr:PropertyName>SubmissionType</hdr:PropertyName>
   <hdr:PropertyValue>QA</hdr:PropertyValue>
  </hdr:Property>
  <hdr:Property>
   <hdr:PropertyName>DataCategory</hdr:PropertyName>
   <hdr:PropertyValue>Onroad</hdr:PropertyValue>
  </hdr:Property>
  <hdr:Property>
   <hdr:PropertyName>CDBDataFile</hdr:PropertyName>
   <a href="https://hdr:PropertyValue-Sample_CDB_File.zip">hdr:PropertyValue-Sample_CDB_File.zip</a>/hdr:PropertyValue>
  </hdr:Property>
 </hdr:Header>
 <hdr:Payload>
  <cer:CERS xmlns:cer="http://www.exchangenetwork.net/schema/cer/1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
      xsi:schemaLocation="http://www.exchangenetwork.net/schema/cer/1 http://www.exchangenetwork.net/schema/cer/1/index.xsd">
   <cer:UserIdentifier>youruserid@xyz.gov</cer:UserIdentifier>
   <cer:ProgramSystemCode>yourPSC</cer:ProgramSystemCode>
   <cer:EmissionsYear>2011</cer:EmissionsYear>
  </cer:CERS>
 </hdr:Payload>
</hdr:Document>
```

EIS Feedback

- EIS checks
 - Required files and folders are present
 - Naming conventions and formats are met
 - Counties in QA report match counties in CDB folders
 - QA Report confirms there are no errors from the QA tool checks

Feedback Report for CDBs Submittal



What EPA will do with submittals

- Collect and compile submitted CDBs
- Run QA tool again
- Contact agencies with questions
- Run latest available MOVES model for CAP/HAP at monthly or finer level
- Load emissions into EIS

Emissions Submittals

- Agencies may submit emissions, but inputs are preferred
- Multiple emissions data are accessible in EIS. If an agency submits, EPA and SLT data will be present.

Onroad Emissions Submittals

- Requirements for submitting onroad emissions inventory
 - CERS
 - Exchange Header
 - Location
 - Emissions Process
 - Reporting Period
 - Emissions
- Optional
 - Excluded Location Parameter

Required - CERS

- Required
 - User ID (EIS login)
 - Program System Code
 - Emissions Year
- Optional
 - Model
 - Model Version
 - Emissions Creation Date
 - Submittal Comment

Required - Exchange Header

Required

- Author Name (not ID)
- Organization Name
- Document Title (EIS)
- Data Flow Name (EIS_v1_0)
- Submission Type (QA or Production)
- Property-Data Category (Onroad)

Optional

- Keywords
- Comments
- Property-NCD Data File (Only when submitting NCD)

Required - Location

- Required
 - State/County FIPS or Tribal Code

- Optional
 - Census Tract Identifier
 - Shape Identifier
 - Location Comment

Required - Emissions Process

- Required
 - State/County FIPS or Tribal Code
 - Source Classification Code
 - Emissions Type Code
- Optional
 - Census Tract
 - Shape Identifier
 - Process Comment

Required - Reporting Period

Required

- State/County FIPS or Tribal Code
- Source Classification Code
- Emissions Type Code
- Reporting Period Type Code
- Calculation Parameter Type Code Only Onroad ("I" for input)
- Calculation Parameter Value and UOM Only Onroad (VMT, E3Mile)
- Calculation Parameter Material Code Only Onroad ("368" for vehicle)

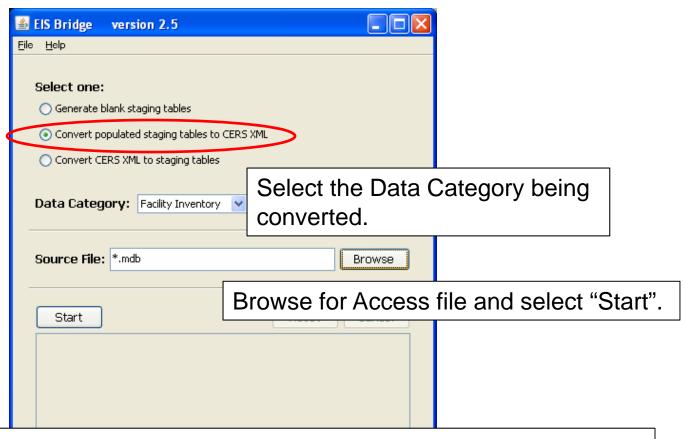
Optional

- Census Tract and Shape Identifier
- Calculation Data Year Only Onroad
- Calculation Data Source Only Onroad
- Reporting Period Comment

Required - Emissions

- Required
 - State/County FIPS or Tribal Code
 - Source Classification Code
 - Emissions Type Code
 - Reporting Period type Code
 - Pollutant Code
 - Total Emissions and UOM
- Optional
 - Census Tract and Shape Identifier
 - Emissions Comment

Creating XML File via the Bridge Tool



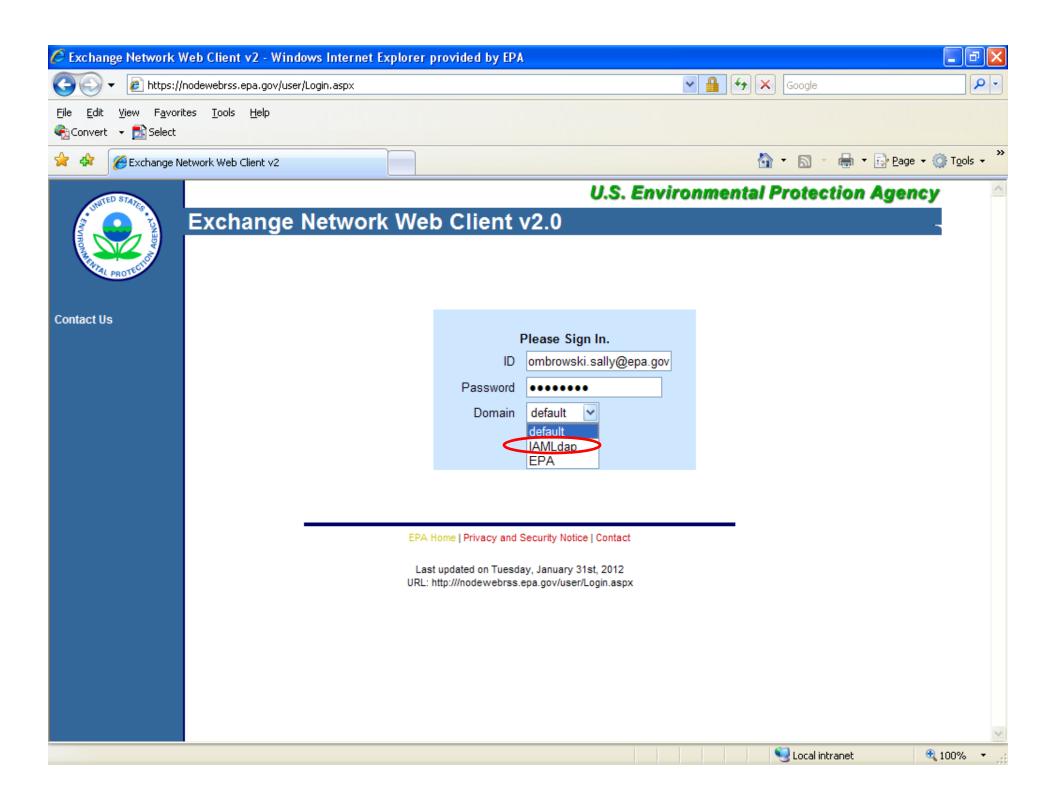
REMEMBER: The Bridge Tool works on Access 2003. If your file is saved as Access 2007 or later, you will need to do a "save as" to Access 2003 prior to using the Bridge Tool.

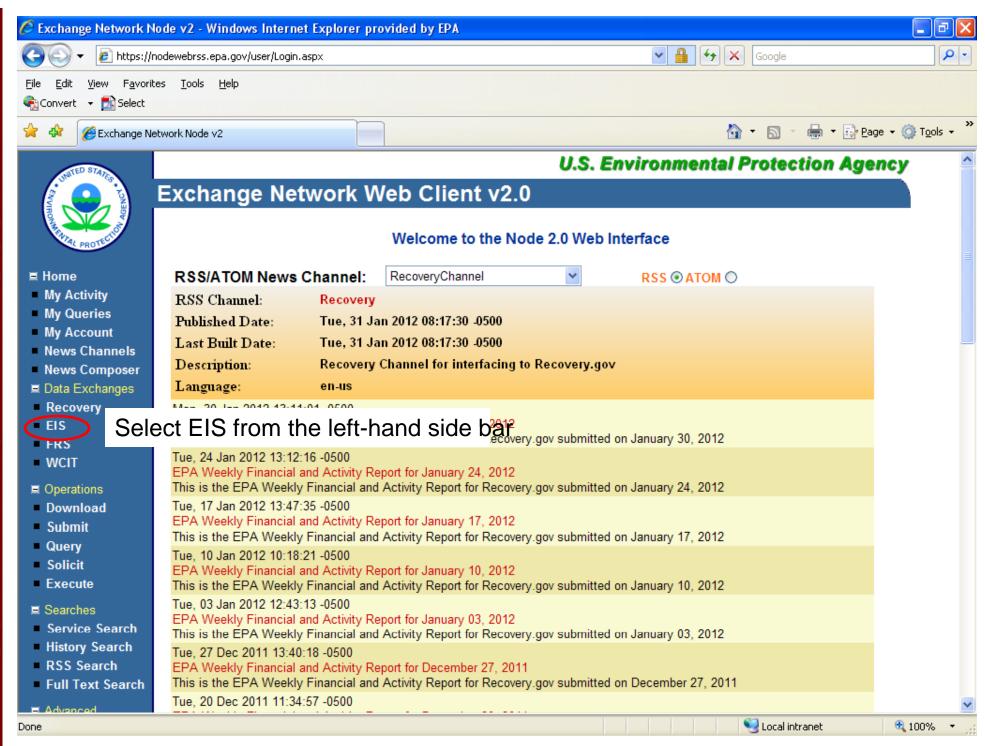
Common Bridge Tool Errors

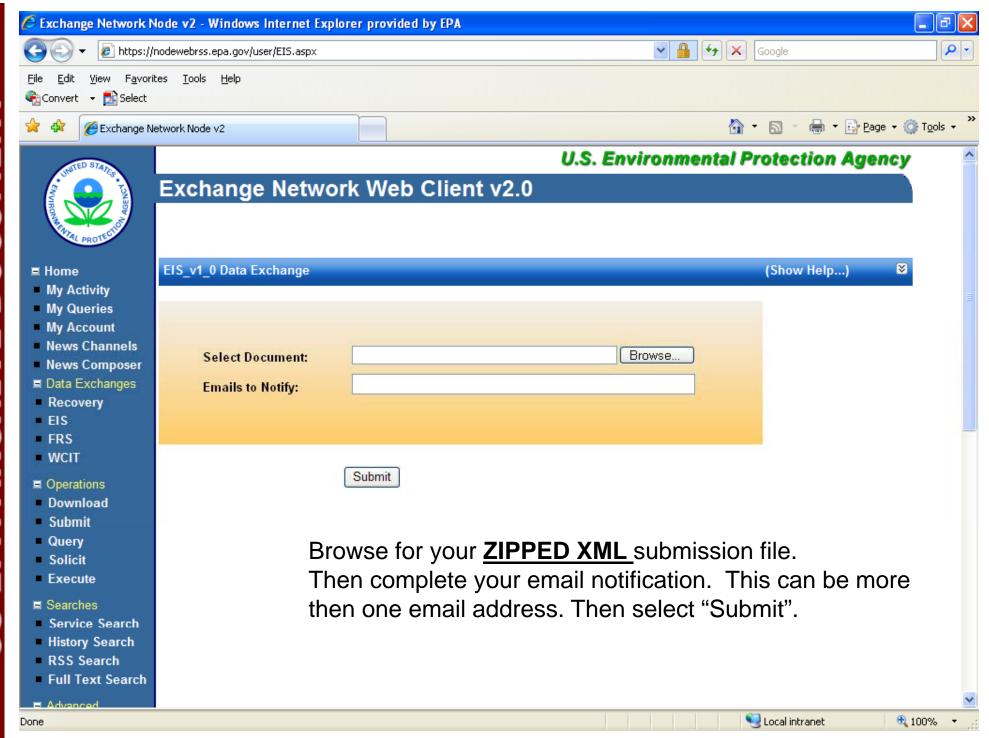
- Look at your xml file prior to zipping it using Note Pad or your web browser.
 Make sure you see all of the components.
 - This error is generally tied to the use of EIS Identifiers. If the submitter uses the EIS Identifiers in one table they must be used in all tables. You can not submit the EIS ID for a process in one table and no process in another.

Submitting the zipped XML File

- Two methods
 - Node-to-node
 - CDX web client (most common method)
 - https://nodewebrss.epa.gov/user/Login.aspx
 - Use Gateway login and password
- QA and Production Environment
 - QA is always open to check your data. Does not change anything in the EIS
 - Production submission is your official submission and will update the EIS
 - Recommend always sending to QA first







Email Notifications

- First email, from "CDXNotification", immediate
 - Transaction Status: **Pending**
- Second email, also from "CDXNotification", when EIS completes processing
 - Transaction Status: Completed. Feedback report is available at EIS Gateway
- Third email, from "noreply" (EIS Gateway), on quarter hours
 - Status : Completed or Failed
 - Wrong file submission error Usually a zipped Access file is submitted instead of the xml file
 - Window closed error "User, agency, submission year not authorized"
 - Completed might be for an XML file containing no data
- Go to EIS Gateway and read the Feedback Report and resolve any critical errors and Potential Duplicates

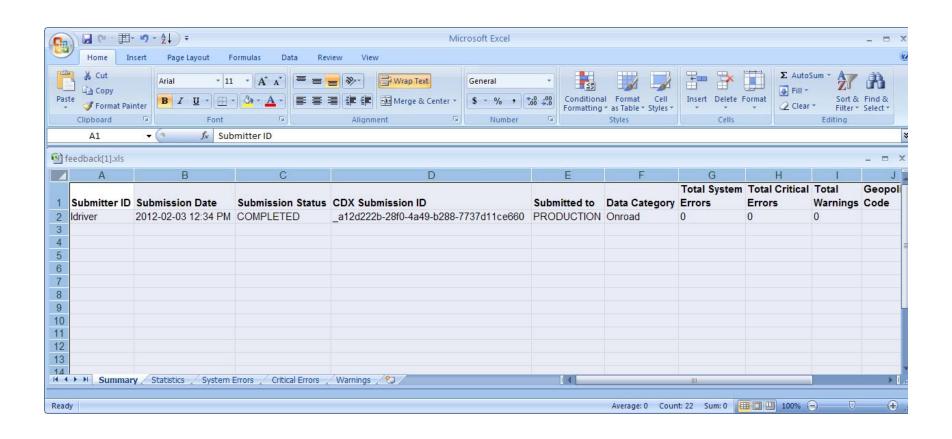
The Feedback Report

- Summary Page
 - Name of submitter
 - What environment submissions was made to
 - QA or Production
 - Data Category submitted
 - Onroad
 - Total number of critical and warning errors.

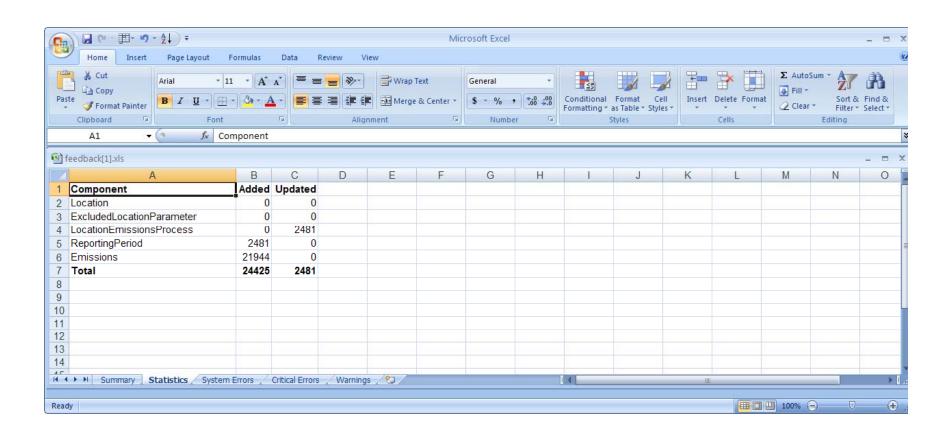
Feedback Report Critical Errors

- The most important page of your feedback report
- All critical errors must be resolved prior to submitting to Production

Feedback



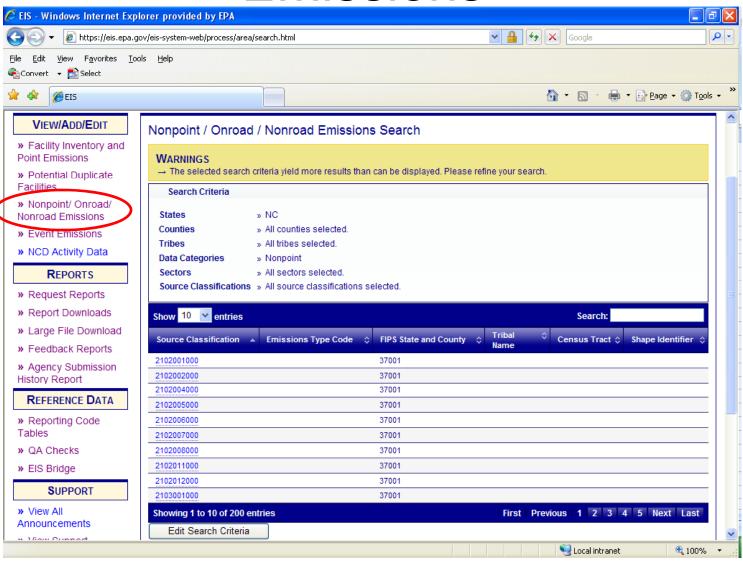
Feedback



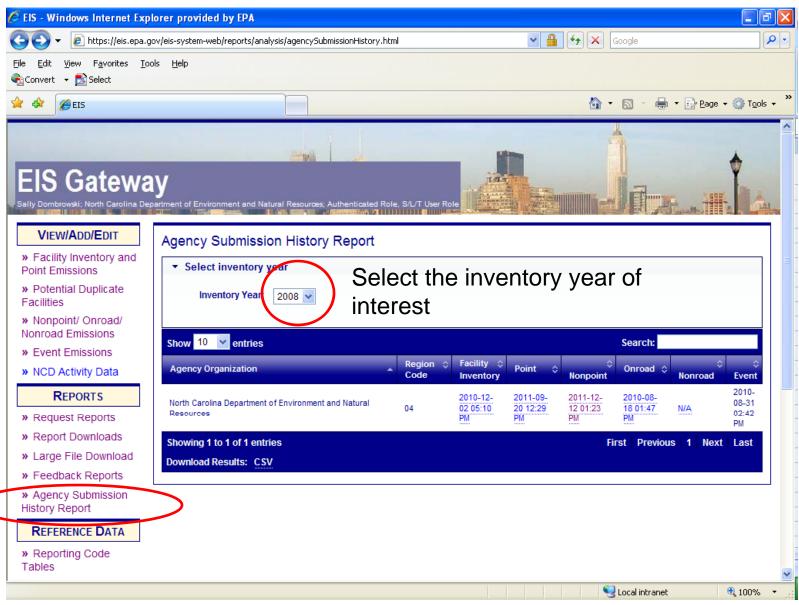
When will my data show up in EIS?

- Onroad data on the Gateway is available immediately
- Reports available the next day

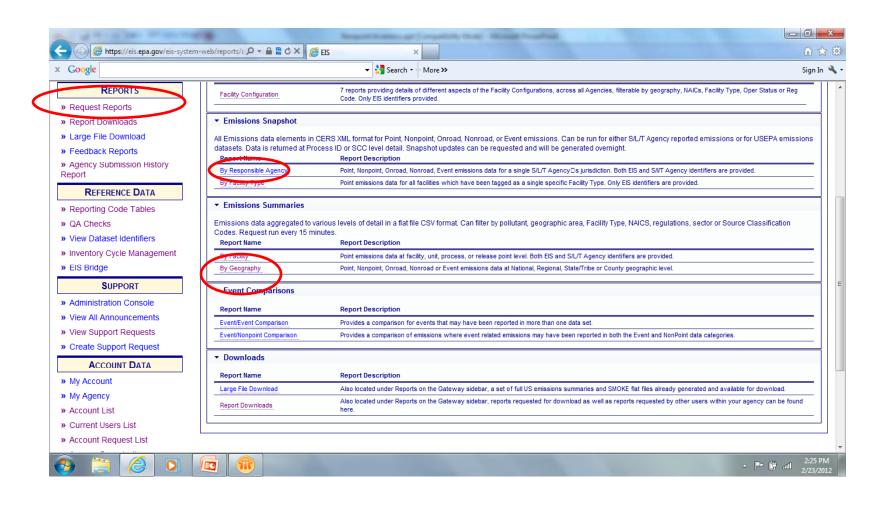
Nonpoint/Onroad/Nonroad Emissions



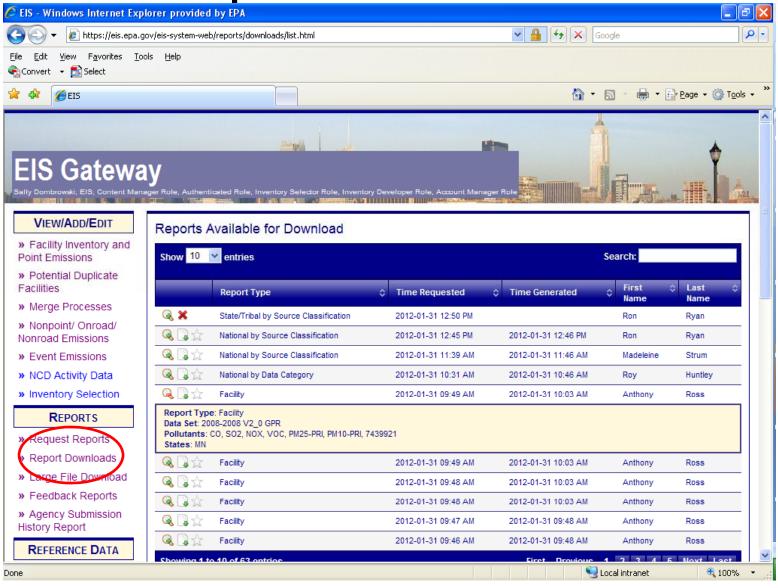
Agency Submission History Report



How do I get data out of EIS?



Report Downloads



How does EPA Check Your Data?

- Again, inputs are strongly preferred. We have QA to fix errors in advance of running MOVES
- Submitted emissions are compared to EPA's for pollutants covered, disagreement between CAP/HAP, anomalous emis type/pol combinations, SCC coverage, etc.

Common Problems

- Overwriting previous submittals. Several submitters in trying to update/correct emissions values, submitted only one pollutant which overwrote previous submittal which contained many pollutants
- Poor use of emission type. For example, all emissions as evap does not make sense.
- Bad emis type/pollutant combinations (e.g., evap pm)

Contacts

- Submittal Issues
 - -Sally Dombrowski dombrowski.sally@epa.gov; 919-541-3269
- Inventory Issues
 - Laurel Driver Mobile Sourcesdriver.laurel@epa.gov, 919-541-2859
- MOVES Issues
 - mobile@epa.gov