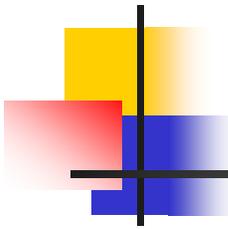


2002 National Emission Inventory (NEI)

- Briefing by: Laurel Driver, USEPA
- For: Rg 6, 7 & 8 EI Planning Meeting
 - Location: Denver
 - Date: March 17, 2004



Purpose of this Briefing

- Provide overview of 2002 NEI Plan
- Discuss how 2002 NEI relates to CERR/SIPs/ROP
- Review past experiences with NEI data incorporation
- Quick update on Mobile Source Tools
- Discuss EPA's QC Plans and Tools
 - ❖ Propose improvements for EPA & S/L/T collaboration during NEI preparation
- Discuss outstanding issues and questions



Overview of 2002 NEI Plan₁

- Why is the NEI important?

We are preparing the 2002 NEI to meet several specific needs, including:

- Key input to regional/national modeling by EPA, RPO's, S/L/T's, etc.
- Basis for National Air Toxics Assessment (NATA) type risk analyses
- Starting point for rule development (past and ongoing examples include Nonroad Rule, Transport Rule, Clear Skies)
- Trends and GPRA tracking
- Public information (esp. important with expanded use of web)
- International Reporting

Overview of 2002 NEI Plan₁

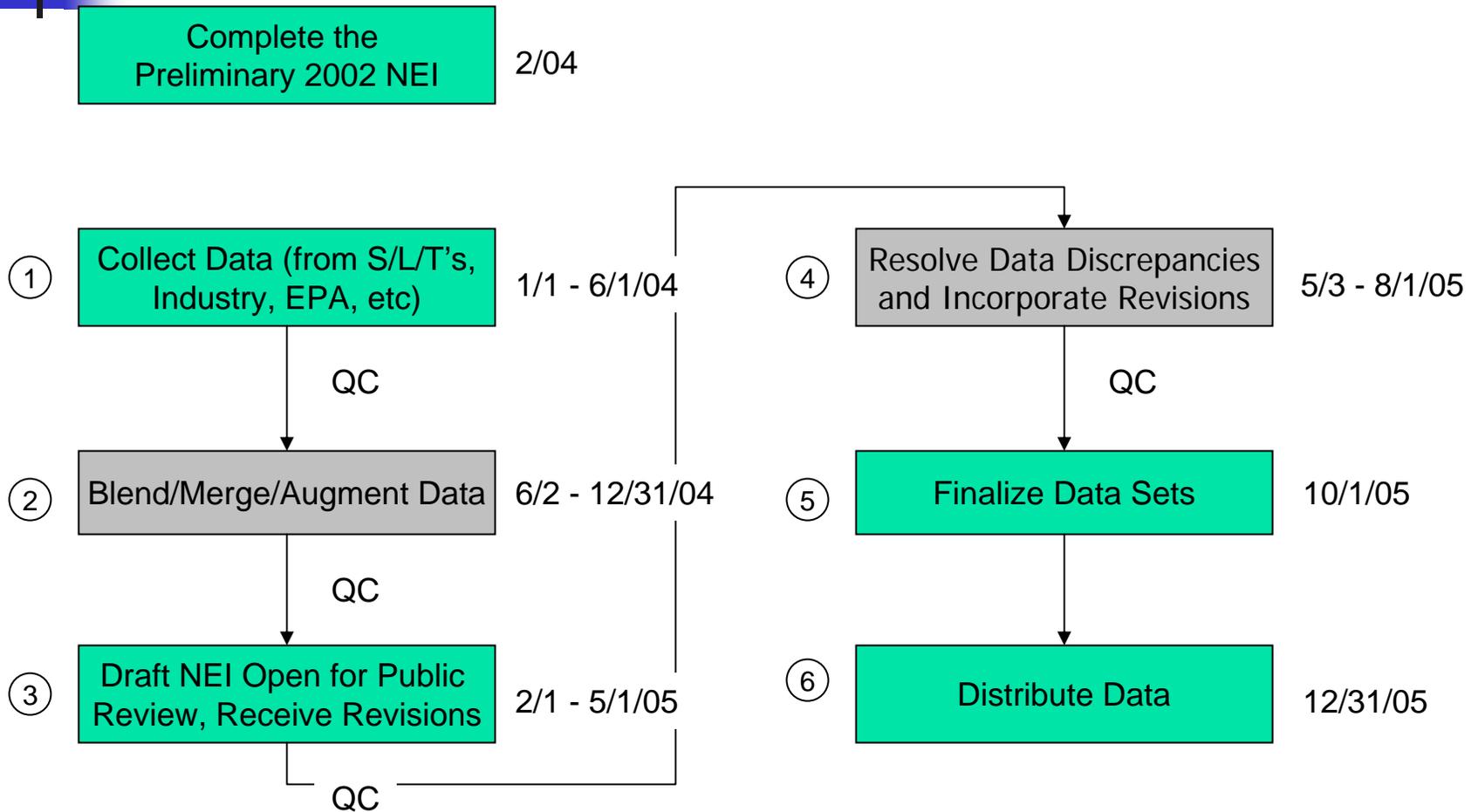
- Highlights of the plan

- Making efficient use of multiple data resources
- Integrating HAPs and criteria data
- Updated input formats (NIF 3.0 & XML Schema)
- Incorporating EPA's Facility Registry System ID's
- More options for S/L/T input
- Identifying priorities for S/L/T input
- Peer Review of final product & method
- Detailed preparation plan - posted draft Dec 19



Overview of 2002 NEI Plan₂

- Major milestones for the 2002 NEI



Overview of 2002 NEI Plan₃

- Plan will include details on:

- Where data are coming from
- How we will handle the data
- What QC will be applied and when
- What blending/merging steps will be
- How data will be augmented
- How final data sets will be distributed



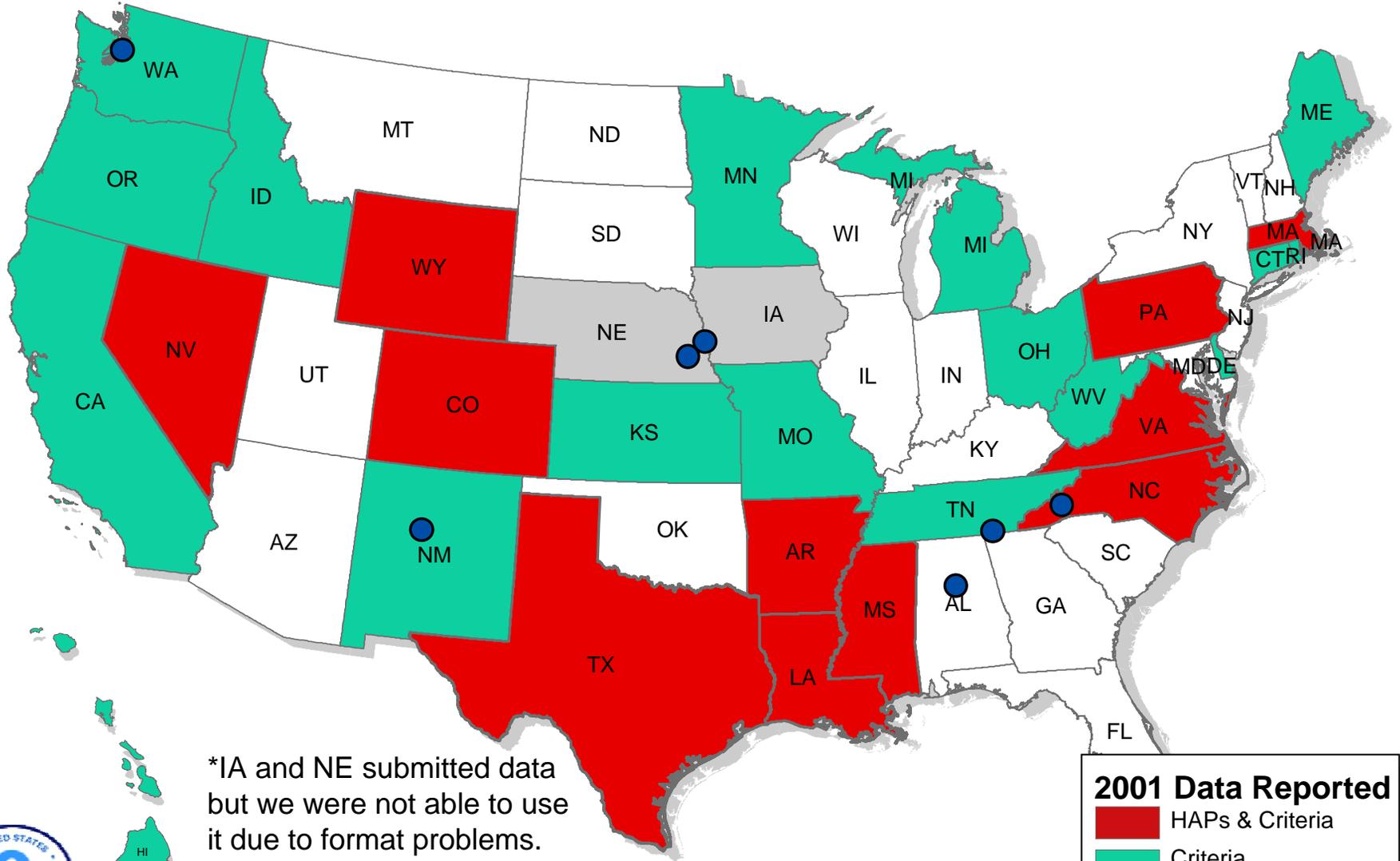
Overview of 2002 NEI Plan₄

- 2002 emission estimates will come from:

- EGU's: MACT, CAMD CEM, DOE, S/L/T
- NonEGU Point: S/L/T ('02, '01, '99), TRI, MACT
- NonPoint: EPA, S/L/T
- Onroad: FHWA, MOBILE6, S/L/T
- Nonroad:
 - NONROAD Model - S/L/T, EPA
 - Planes, Locomotives, Vessels – S/L/T, EPA



Reference: 2001 NEI Point Source Data Rcvd*



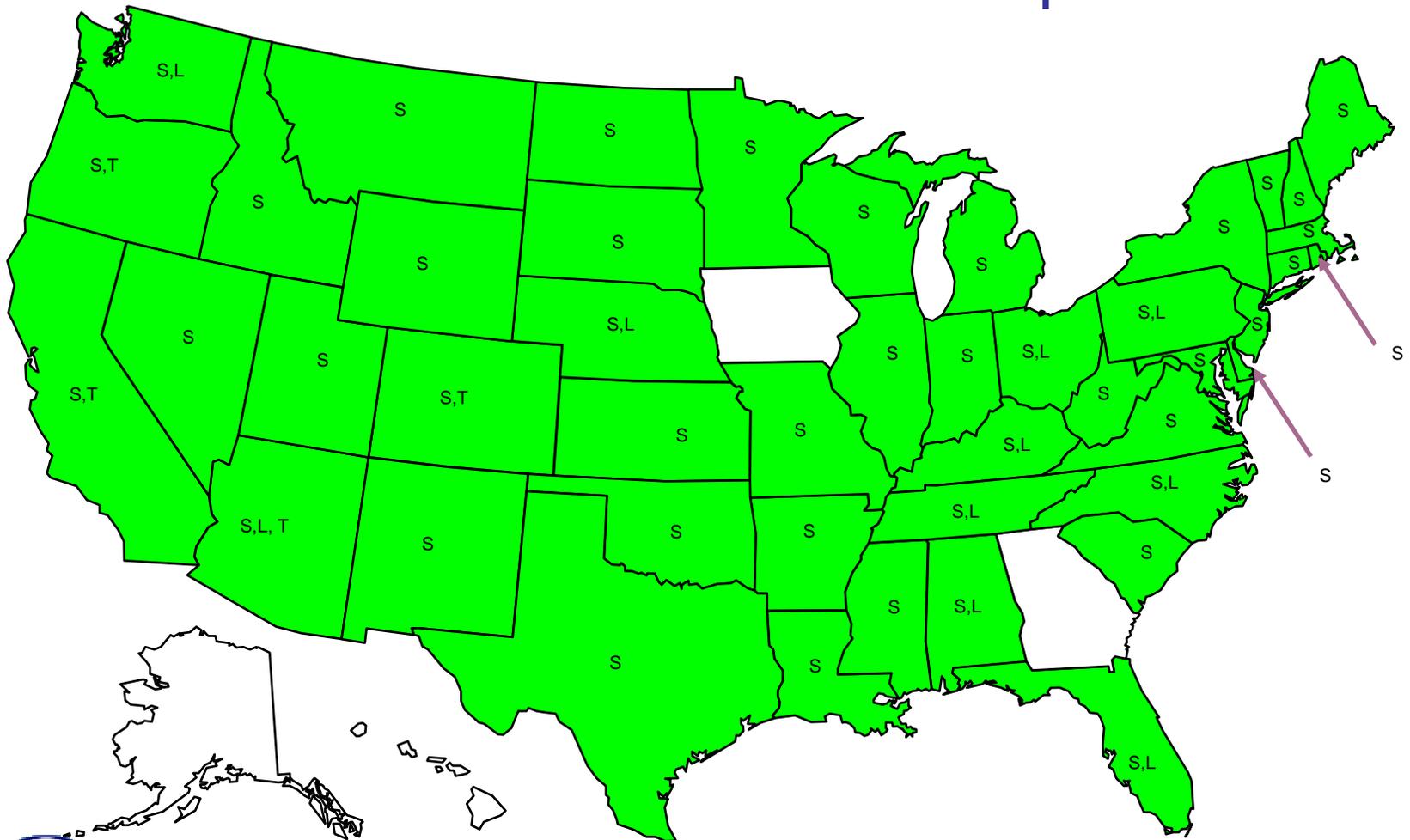
*IA and NE submitted data but we were not able to use it due to format problems.

2001 Data Reported

- HAPs & Criteria
- Criteria
- Local Agencies

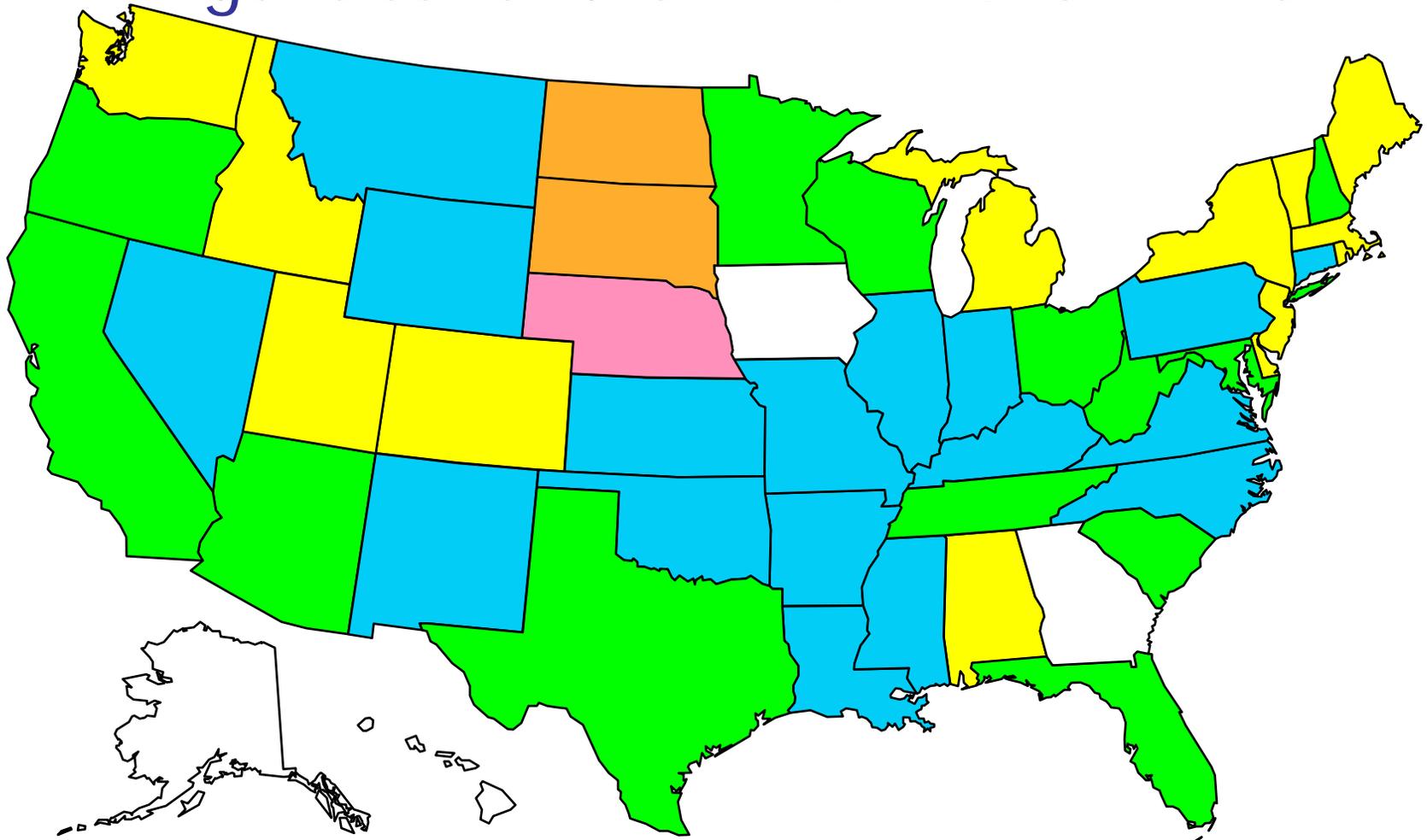


Reference: Agencies that participated in 1999 NEI for HAPs Development



Green - states (agencies) who submitted HAP inventory data or revisions
T - tribes
L - local agencies
S - state agencies

Reference: Type of HAP Data Provided by Agencies for the 1999 NEI for HAPs



Green - state with agencies) who submitted 1999 HAP data for point, nonpoint and mobile
Yellow - states with agencies who submitted 1999 HAP data for point and nonpoint
Pink - states with agency who submitted 1999 HAP data for point abnd mobile
Blue - states with agencies who submitted 1999 HAP data for point
Orange - states who submitted 1999 HAP data for nonpoint



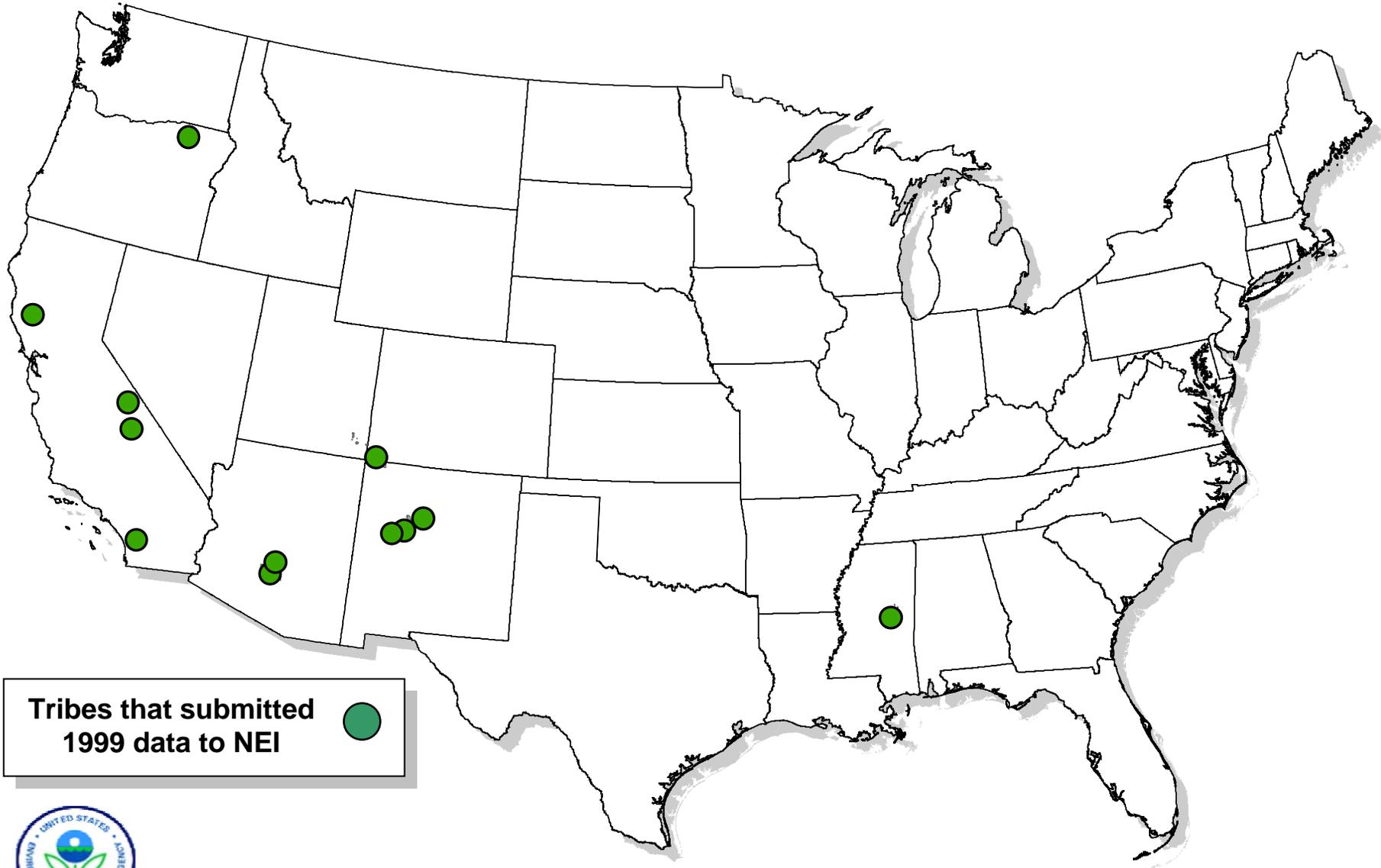
Overview of 2002 NEI Plan₅

- Incorporation of Tribal data into 2002 NEI

- EPA will work w/ Tribes, ITEP, RPO's to accept and incorporate 2002 tribal EI data
- Will use 1999 data if updates not available
- Point sources will be incorporated into NEI based on locational coordinates (lat/lons)
- Need to address:
 - How to incorporate area/mobile data
 - How to resolve discrepancies w/ data located on tribal lands from nontribal data providers



Reference: Tribal Inventories Rcvd for 1999



**Tribes that submitted
1999 data to NEI**



Overview of 2002 NEI Plan₆

- EPA's priorities for S/L/T's

- We are able to estimate emissions for most electric generators, some nonpoint sources, mobile sources
- Need State/Local/Tribes to provide data for and/or look closely at:
 - Small EGU's and non-EGU's point sources
 - Certain nonpoint and nonroad source categories
 - Largest emitters for each criteria pollutant (eg top 50)
 - Annual emissions, units (tons, lbs), stack parameters, locational coordinates, boiler size (esp top emitters)
 - Temporal data that can be used as aq modeling inputs
- Use consistent site ID's. If starting a new ID system, give EPA a crosswalk.



Overview of 2002 NEI Plan₇

- Updated Data Transfer Formats

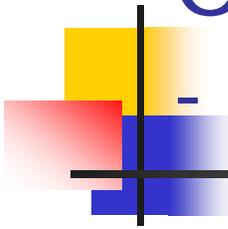
- NIF V3.0

- <http://www.epa.gov/ttn/chief/nif/index.html>
- Implements/complies with EPA data standards
- User guide reformatted and expanded to address implementation of new fields, provide additional instruction

- NEI XML Schema

- Working individually with several states that plan to use xml

- Transfer procedures are the same (CDX)



Overview of 2002 NEI Plan_g

- EPA Data Standards That Influence NEI

- Facility Identification
- Latitude/Longitude
- Chemical Identification
- Date
- NAICS
- Contact
- Tribal Identifier

Overview of 2002 NEI Plan₉

- Examples of Changes From NIFV2.0 to V3.0

- Facility ID standard –

Ex's. of SI (Site) record changes

NIFV2.0 Field	NIFV3.0 Field	Type of Change
COUNTY FIPS (A,3) STATE FIPS (A,2)	COUNTY AND STATE FIPS CODE (A,5)	Combine two fields w existing lengths
SITE ID (A,15)	STATE FACILITY IDENTIFIER (A,15)	New name
FACILITY NAME (A,50)	FACILITY NAME (A,80)	Increase length
STREET LINE 1, 2, 3	LOCATION ADDRESS (A,50)	Replace 3 fields w one
ADDRESS TYPE CODE		Delete, Address=physical
CITY(A,30)	CITY(A,60)	Increase length

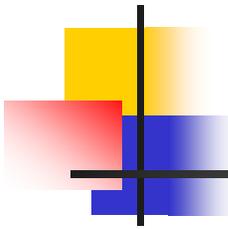
Overview of 2002 NEI Plan₁₀

- Examples of Changes From NIFV2.0 to V3.0

- Latitude/ Longitude standard –

Ex's. of Emission Release Point record changes

NIFV2.0 Field	NIFV3.0 Field	Type of Change
NA	HORIZONTAL COLLECTION METHOD CODE (A,3)	Add field
NA	HORIZONTAL ACCURACY MEASURE (A,6)	Add field
NA	HORIZONTAL REFERENCE DATUM CODE (A, 3)	Add field
NA	REFERENCE POINT CODE (A,3)	Add field
NA	SOURCE MAP SCALE NUMBER (A,10)	Add field
NA	COORDINATE DATA SOURCE CODE (A,3)	Add field



NEI and Regulatory Reporting₁

- Review and discuss similarities and differences
- Identify and compare role of S/L/T EI data in each

NEI and Regulatory Reporting₂

- For / by whom

CERR

Regulatory requirement for S/L/T's to report criteria data to EPA

2002 NEI

Process undertaken by EPA EFIG to compile integrated national inventory for criteria and HAP emissions

SIP EIs

Regulatory requirement for S/L's (O₃, PM_{2.5}, Regional Haze)

Technical/public review and approval process by EPA Regional Offices

NEI and Regulatory Reporting₃

- Purpose(s)

CERR

Consolidates criteria emissions data reporting requirements to support various activities including the S/L/T's periodic emission inventories, NOx SIP Call reporting, and the EPA NEI

2002 NEI

National inventory of criteria & HAP emissions data for use in regional AQ modeling by EPA, human exposure risk assessments, and trends assessments - also available to others (e.g. RPOs)

SIP EIs

Criteria data and documentation as input to the air quality modeling for attainment strategy, the public review process, and rate of progress tracking (ROP)

NEI and Regulatory Reporting₄

- Operational distinctions

CERR

Detail data by sector, Statewide by county, Due by Jun 1 in NIF or XML

2002 NEI

Blends multiple data sources including from CERR reports of Jun 1

Seeks S/L/T review and corrections, 2-yr effort through Dec 2005

Detail data, National by county/tribal area

Defaults to some natl methods for data completeness & consistency

Will undergo peer review

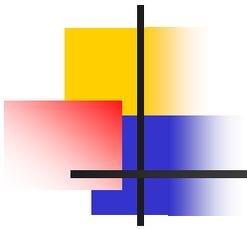
SIP EIs

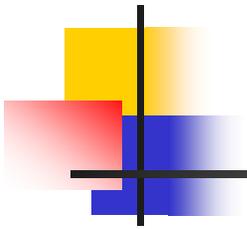
CAP emissions and documentation as input to air quality modeling

for attainment strategy and rate of progress tracking (ROP)

Due dates vary through 2007

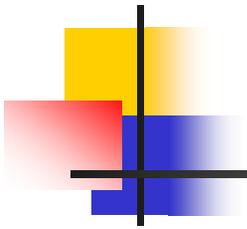
Past Experiences w/ Data Incorporation₁

- 
-
- Region 6, 7 & 8 state data were received for incorporation into 1999 NEI
 - Some problems and successes encountered during basic quality checking and data incorporation



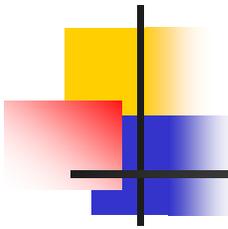
Quick update on Mobile Source Tools: What is NMIM?

- The **N**ational **M**obile **I**nventory **M**odel is a consolidated emissions modeling system for EPA's MOBILE and NONROAD models.
- NMIM combines a Java framework with MOBILE, NONROAD, and a national county database.
- Generates monthly, county inventories for years from 1999 to 2050.



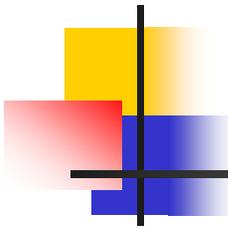
Why NMIM?

- Consistency
 - between NEI and OTAQ rulemaking
 - between criteria pollutants and HAPS
- Improved access
 - to inventory input information
 - to inventory building tools



County Specific Inputs

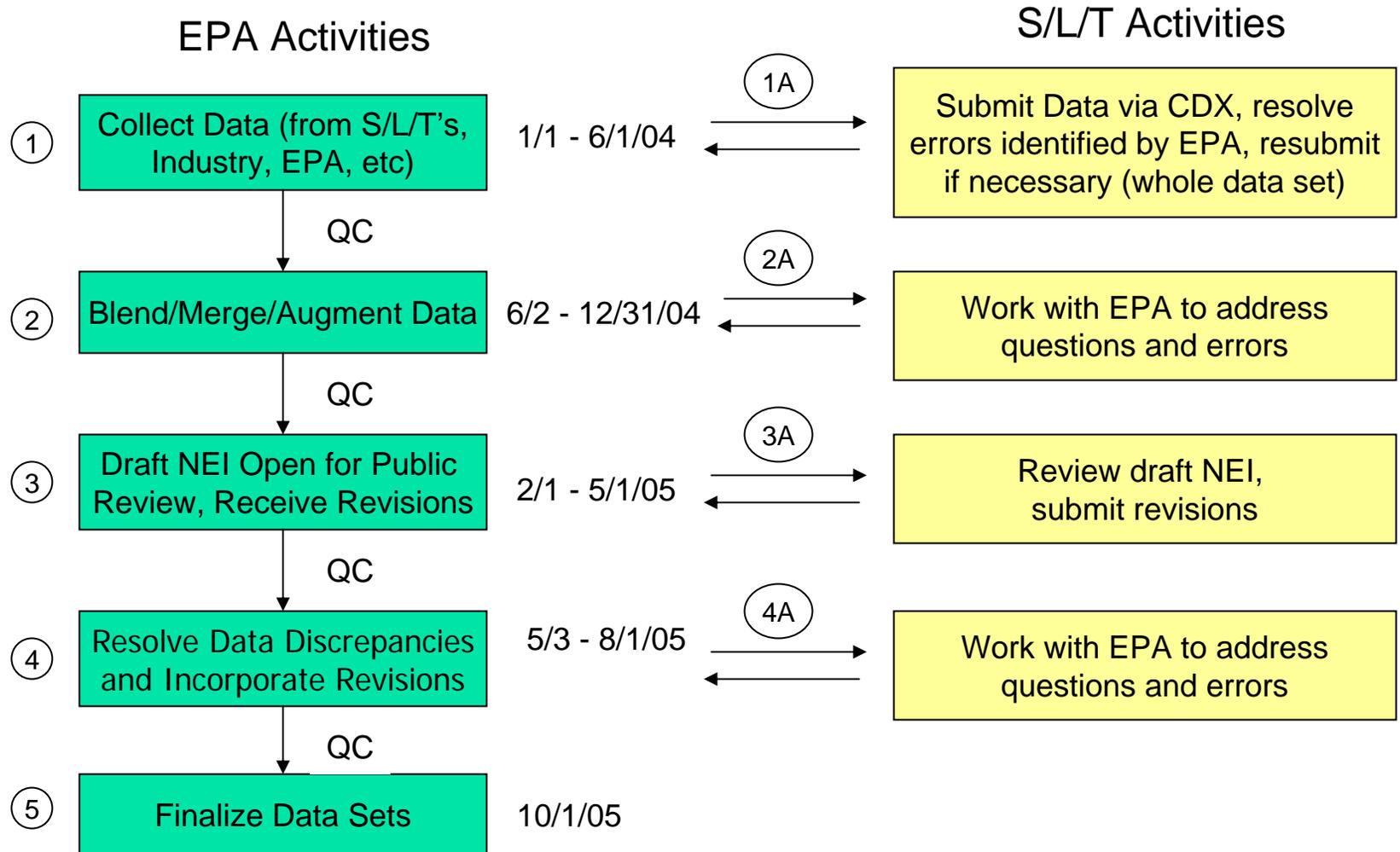
- Min, max, average temperatures
- Fuel characteristics
- Base year VMT, monthly allocation
- VMT growth
- Local emission control programs
- Many others



NMIM and the NEI

- Previously, EPA generated inventories based on default inputs and States could replace those *inventories* in the NEI.
- Now, States will supply *inputs* and documentation to NMIM database.
- Hence, rulemaking inventories, including projections, will be consistent with NEI.

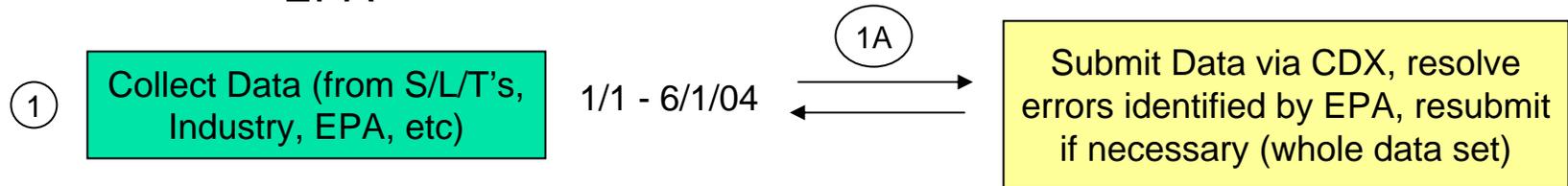
Feedback and Review Mechanisms₁



Feedback and Review Mechanisms₂

EPA

S/L/T



1A

- Early feedback about geographic and pollutant coverage in the NIF data submittal and format and code errors.
- Option to submit data as revision to Preliminary NEI or as new submittal

Suggested S/L/T focus during Jan – May period:

- Do internal QC on inventory and then run QC software on NIF files
- Review 2002 NEI Plan re priorities for processing S/L/T data, quality checks, and default augmentation procedures and for identified sources of add'tl data
- Review prelim 2002 NEI and endorse/ communicate to EPA those portions you accept as no further corrections intended (EGU's, etc)
- Focus on stationary sectors of prelim NEI & submit corrections as appropriate
- Submit complete sector file(s) to EFIG for initial completeness check and QC screening (files will not be processed for incorporation until after Jun 1)

Feedback and Review Mechanisms₃

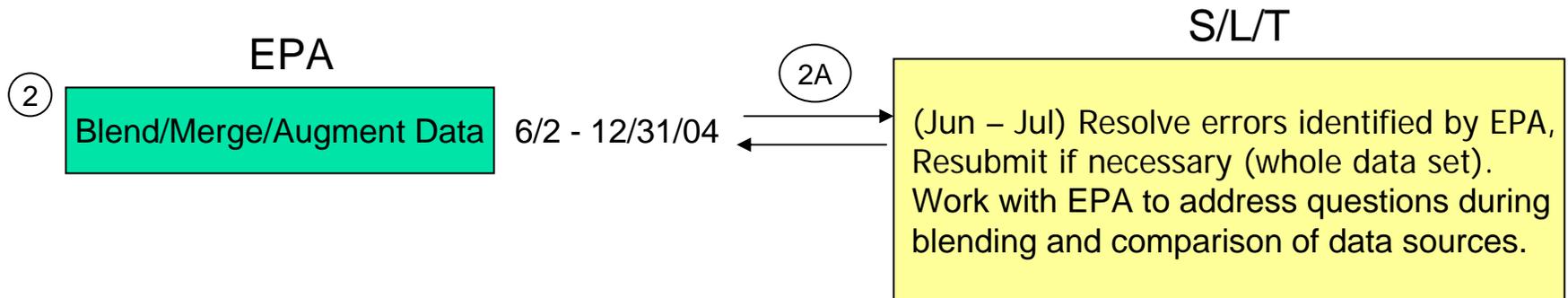


- Are There Advantages to Submitting Data Early?

- EPA will screen the data files submitted January 1 - May 1, 2004 and provide feedback on potential problems
 - EPA will run the Extended Quality Control tool to confirm data are free of basic format errors & to provide quick feedback on data coverage
 - If errors or missing data are encountered:
 - EPA will send summary reports to submitters listing discrepancies and how to correct
 - S/L/T's can resubmit corrected data prior through May 1
 - Resubmittals must be whole replacement datasets



Feedback and Review Mechanisms₄



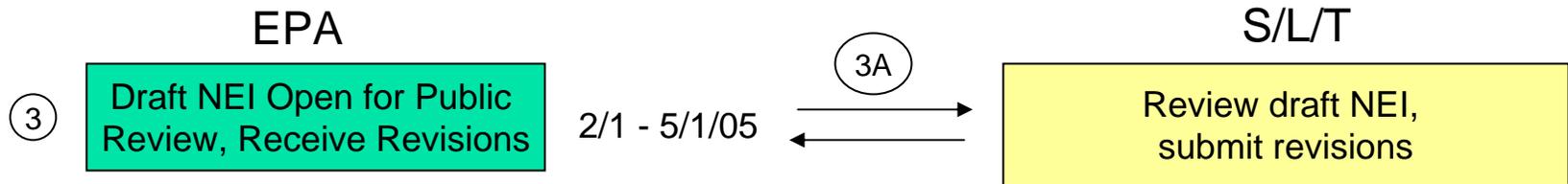
2A -Adhoc communications to resolve data discrepancies (emails/phone calls)

Jun – Jul period will cover EPA review and quality checking of S/L/T data files received by Jun 1, reporting of problems/successes to data submitters and seeking their help with any necessary corrections.

Pending successful problem solving, data files may be compared with other data sources and undergo data completion procedures.

EPA will seek help of data submitters to resolve questions that may arise during this comparison/ completion process.

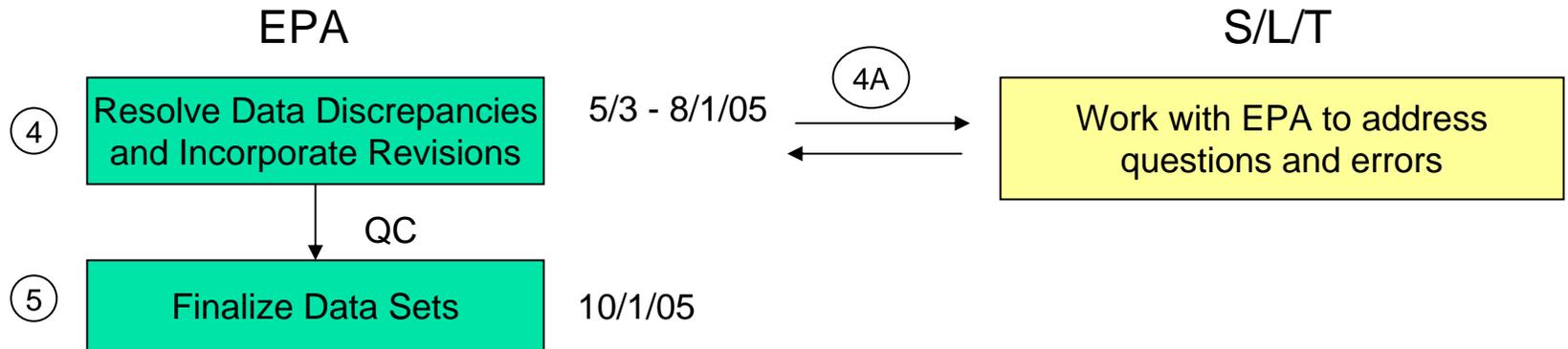
Feedback and Review Mechanisms₅



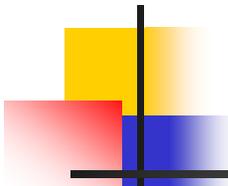
3A

- Draft inventory in full detail and various summaries
- Report summarizing the changes EPA is proposing to the S/L/T submittal
- S/L/T's can provide revisions in NIF or Change form

Feedback and Review Mechanisms₆



- 4A - Adhoc communications to resolve data discrepancies (emails/phone calls)
- 5A - Report summarizing the final changes to the S/L/T submittal



NEI Usergroup Listserv

- EFIG will use the listserv to communicate releases of and answers to questions related to NEI documentation, the actual NEI data, and the NEI tools.
- Sign up from the CHIEF Web site:

<http://www.epa.gov/ttn/chief/listserv.html>

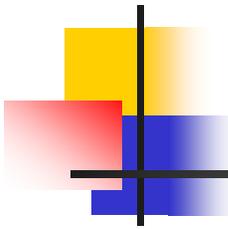
To **subscribe** to the NEI Listserv, fill in your e-mail address, and your first and last name. For example:
doe.john@epamail.epa.gov
John Doe

Press the **Join NEI-Usergroup** button to subscribe.

Email:

Name:

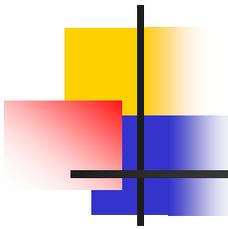
You will receive a welcome e-mail and information about using the listserv.



Questions₁

- We need input from S/L/T:
 - How to make the process work better
 - Of the activities that we have described for your particular focus in the NEI development, such as during the data submittal process and feedback mechanisms, what degree of success do you anticipate?
 - What problems and successes are you having with the tools that EPA has provided?
 - Who used the data summaries posted by EFIG to facilitate their 1999 NEI data review and comment?
 - How well did those summaries work for you?

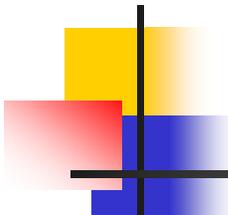




Questions₂

- We need input from S/L/T:
 - Emission Inventory Data
 - Who expects to make an early submittal? A late submittal ? / Why?
 - How complete of a CERR submittal do you expect to make by Jun 1? (sector/geographic coverage/pollutants)
 - What other Q's do you have for us at this time?
 - Ideas & Improvements for Beyond 2002

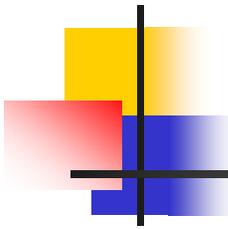




Other NEI Issues

- Annual vs. daily emissions
- Mobile sources
 - Tons vs. model inputs
 - Temperature inputs to MOBILE
- Agriculture issues
- Fires and open burning issues
- Rule Effectiveness
- Fugitive dust
- Coordination with RPO inventory efforts
- Relationship to future SIP inventories
- Subsequent versions/version proliferation
- Improved data access
- Peer review
- PM test data for EF's

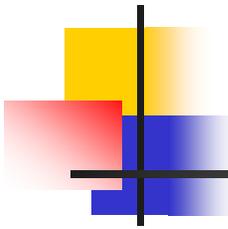




Conclusion₁:

- Contact us if you have questions or suggestions:
 - David Misenheimer – 2002 NEI Coordinator
(misenheimer.david@epa.gov, 919-541-5473)
 - Anne Pope – NonEGU Point Sources
(pope.anne@epa.gov, 919-541-5373)
 - Roy Huntley – EGU's, Nonpoint Stationary Sources
(huntley.roy@epa.gov, 919-541-1060)
 - Laurel Driver – Nonpoint and Mobile Sources
(driver.laurel@epa.gov, 919-541-2859)

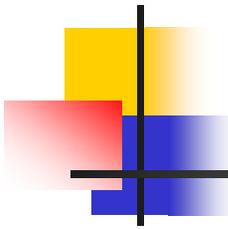




Conclusion₂:

- Additional contacts:
 - Sally Dombrowski – Data Submittals and QC
(dombrowski.sally@epa.gov, 919-541-3269)
 - Rhonda Thompson – Data Storage and Distribution
(thompson.rhonda@epa.gov, 919-541-5538)
 - Lee Tooly – NIF and XML Formats
(tooly.lee@epa.gov, 919-541-5292)
 - Dennis Beauregard – FAQ Development and Outreach
(beauregard.dennis@epa.gov, 919-541-5512)





Conclusion₃:

- Additional contacts:
 - Phil Lorang – Program Manager
(lorang.phil@epa.gov, 919-541-5463)
 - Info CHIEF Help Desk – Web site and software support
(info.chief@epa.gov, 919-541-1000)

