

# Identification of BART-Eligible Sources in the WRAP Region

A Summary of the April 4, 2005  
Draft Report

# Regional Haze Rule Requirements for Best Available Retrofit Technology

- 40 CFR 51.308(e)(1)
  - Identify BART-eligible sources
  - Determine which of these should be subject to BART
  - Determine the appropriate control technology / limit
- 40 CFR 51.308(e)(2)
  - Allows an alternative program that provides for greater reasonable progress than BART
  - Must identify and include BART-eligible sources

# What Is a BART-Eligible Source?

- A stationary source is BART-eligible if ...
  - it belongs to one of 26 source categories,
  - has emission units which were “in existence” on 8/7/77 but “not in operation” before 8/7/62, and
  - has a potential to emit more than 250 tpy of a visibility-impairing pollutant across all date-eligible units.
- A BART source may be a portion of a facility
- That portion may include more or less units over time as individual units are reconstructed or shut down

# Project Objectives

- Develop and maintain a regional database of eligible and potentially-eligible sources, their emissions, and current controls
- Promote consistency in how sources are being identified across the region
- Establish a common method and preliminary list of sources

# How Were Eligible Sources Identified?

- Few states had a reliable list of eligible sources at the start of the project, and different interpretations of the BART guidelines
- All eligible sources were identified by either ...
  - the SO<sub>2</sub> Annex,
  - a state or tribe and subsequently verified by ERG, or
  - ERG and subsequently verified by a state or tribe.

# How Were Eligible Sources Identified?

- Cast wide net to identify category-eligible sources
  - Any source in the 1999 or preliminary 2002 NEI with actual emissions greater than 100 tons and an SIC code(s), SCCs, NAICS, or MACT codes related to one of the 26 source categories
    - Developed “crosswalk” of codes with categories
  - Any source in a variety of Title V databases with an SIC code(s) related to one of the 26 source categories
  - Any source identified in a variety of EPA documents
    - Background docs for NSPS, MACT, AP-42, etc.

# How Were Eligible Sources Identified?

- Obtained date information from ...
  - EIA databases
  - Title V databases
  - EPA background documents
- Dates do not necessarily reflect the “existence” and “operation” definitions in the BART rule
- Dates often pertain to a facility as a whole and are often not available (or could not be obtained by ERG) for specific units, especially non-EGUs

# How Were Eligible Sources Identified?

- Information on potential emissions is often not available (or could not be obtained by ERG)
  - Somewhat moot until date-eligible units are identified
  - Some Title V permits identified entire source as having PTE < 250, in which case source deemed not eligible
  - EGUs which have actual emissions > 250 are assumed to have a PTE > 250, therefore eligible
- As a result ...
  - Eligibility for non-EGUs is only determined on a facility-wide level – i.e., at least part of the source is eligible

# How Were Eligible Sources Identified?

- For tribes, additional steps were taken
  - Used GIS to identify NEI sources on tribal lands (already done by ITEP) and then identified those with emissions  $> 100$  tpy and belonging to one of 26 BART categories
  - Obtained lists of Part 71 sources from EPA regional offices and identified those sources belonging to a BART category
  - Compared results above and identified discrepancies
  - Most resulting sources also appear on state lists
- *For illustration of process, see Figure 2-1 in draft report*

# Results

- For each facility, each of the three eligibility criteria (category, size, and date) were examined and rated

Y = Yes *[the criteria is satisfied]*

M = Maybe *[there is reason to believe it may be satisfied]*

D = Don't know *[information not yet available]*

N = No *[the criteria is clearly not met]*

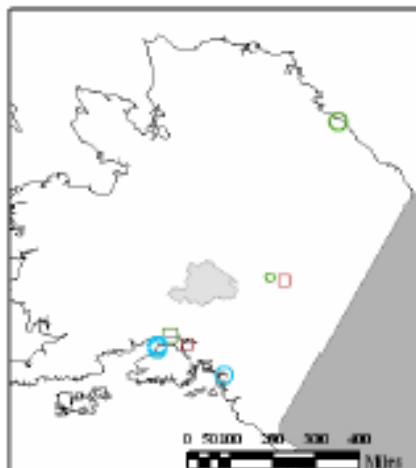
- *For further details, see Table 2-4 in draft report*

# Results

- Based on the ratings assigned to each criteria, an overall BART-eligibility rating was determined for each facility
  - Yes *[at least part of the facility is BART-eligible]*
  - Likely *[2 of the 3 eligibility criteria are satisfied]*
  - Potentially
  - Don't know *[no data available for at least 2 criteria]*
  - *See Appendix H for master list of source ratings*
- Additionally, for EGUs, sources containing at least one eligible unit were segregated into eligible, ineligible, and possibly-eligible portions
  - *See Appendix K for these lists*

**Table 3-1. Source BART-Eligibility by Level of Certainty**

State	Number of Sources Considered	Level of Certainty (number of sources)				
		Yes	Likely	Potentially	Do Not Know	No
Alaska	29	2	5	3	1	18
Arizona	61	9	8	3	5	36
California	434	5	27	55	102	245
Colorado	156	11	1	6	3	135
Idaho	46	6	0	1	4	35
Montana	48	3	1	10	8	26
Nevada	48	8	0	1	0	39
New Mexico	153	6	4	4	12	127
North Dakota	30	6	2	3	0	19
Oregon	101	7	8	7	6	73
South Dakota	53	1	3	0	0	49
Utah	61	2	0	8	3	48
Washington	145	5	9	11	3	117
Wyoming	107	14	2	5	4	82
Tribal Land	97	2	0	3	3	89
<b>Grand Total</b>	<b>1,569</b>	<b>87</b>	<b>70</b>	<b>120</b>	<b>154</b>	<b>1,138</b>



Size determined by highest-emitting pollutant of one or more of the following:  
 $\text{SO}_2$ ,  $\text{NO}_x$ ,  $\text{PM}_{10}$ , VOC

**Legend**

**Category; Size of Units (TPY)**

- EGU; < 1,000
- EGU; 1,000 - 4,999
- EGU; 5,000 - 9,999
- EGU; > 10,000

**Category; Size of Source (TPY)**

- Non-EGU; < 1,000
- Non-EGU; 1,000 - 4,999
- Non-EGU; 5,000 - 9,999
- Non-EGU; > 10,000

■ Class I Area

- /○ "Yes" BART-Eligible Sources
- /○ "Likely" BART-Eligible Sources
- /○ "Potentially" BART-Eligible Sources

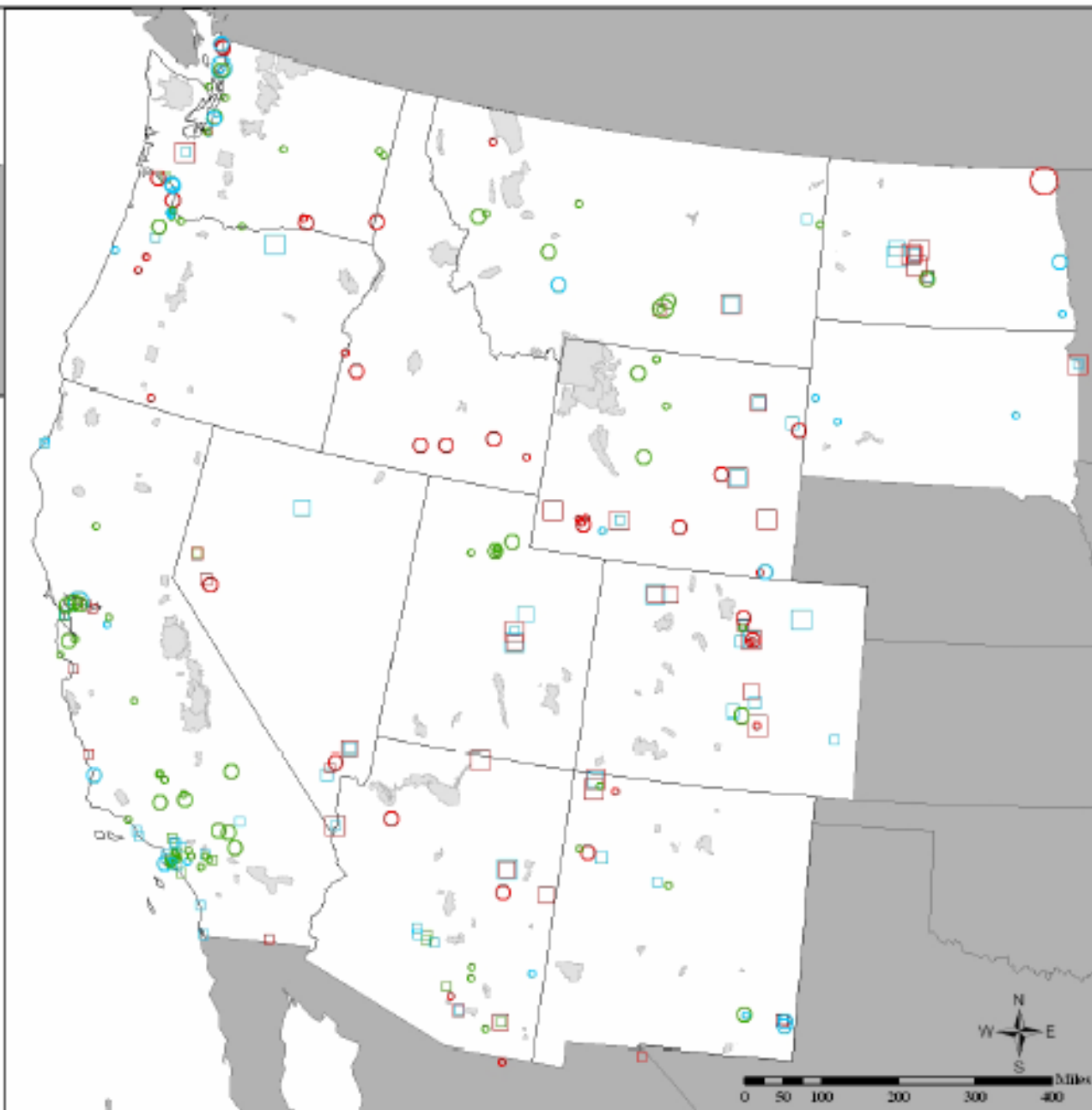


Figure 3-4. NO<sub>x</sub> Emissions from EGUs and Facility-Wide Emissions from non-EGUs by Certainty of BART-eligibility and Other Sources in the WRAP Region (2002 Emissions)

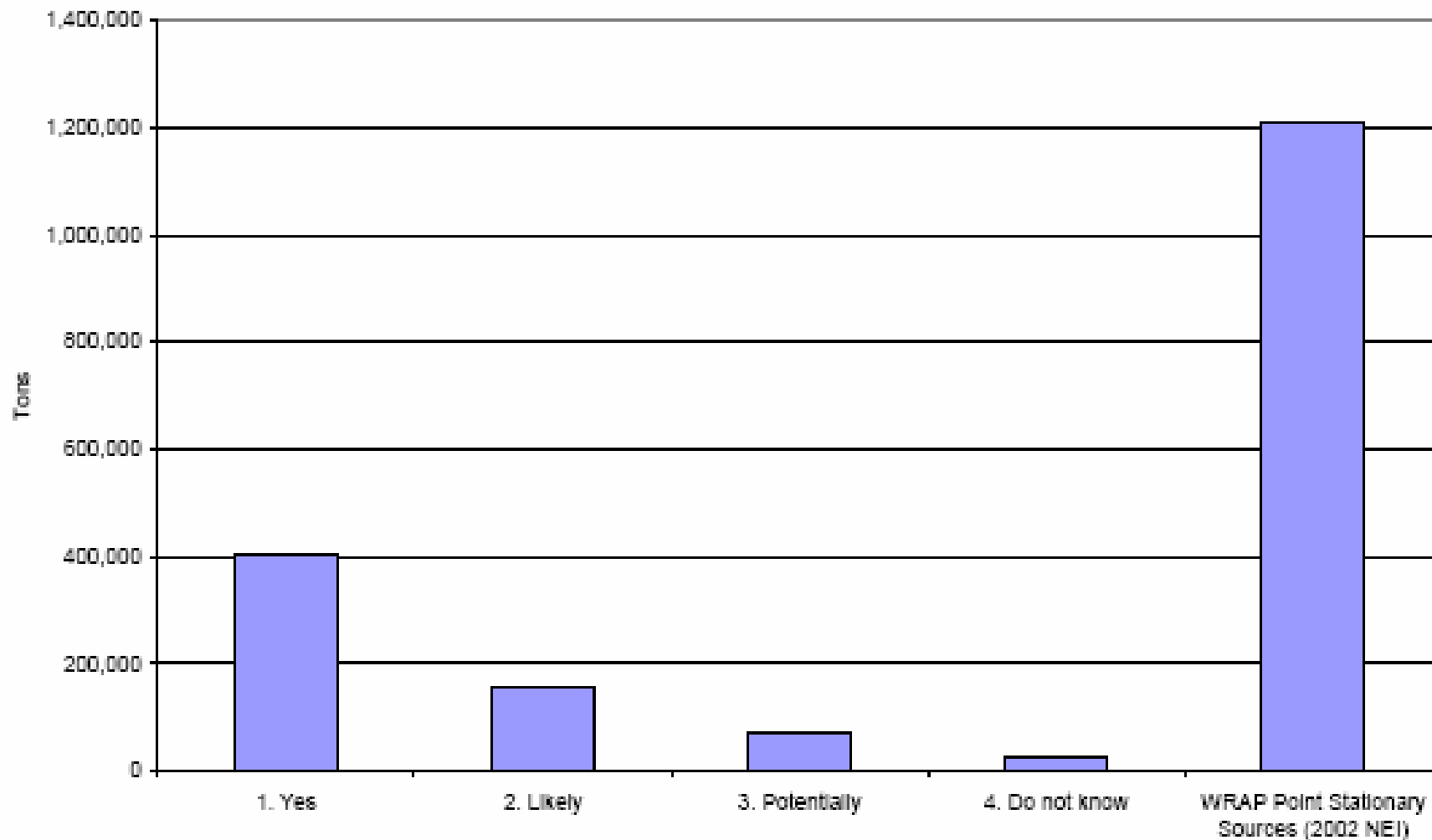


Figure 3-5. PM<sub>10</sub> Emissions from EGUs and Facility-Wide Emissions from non-EGUs by Certainty of BART-eligibility and Other Sources in the WRAP Region (2002 Emissions)

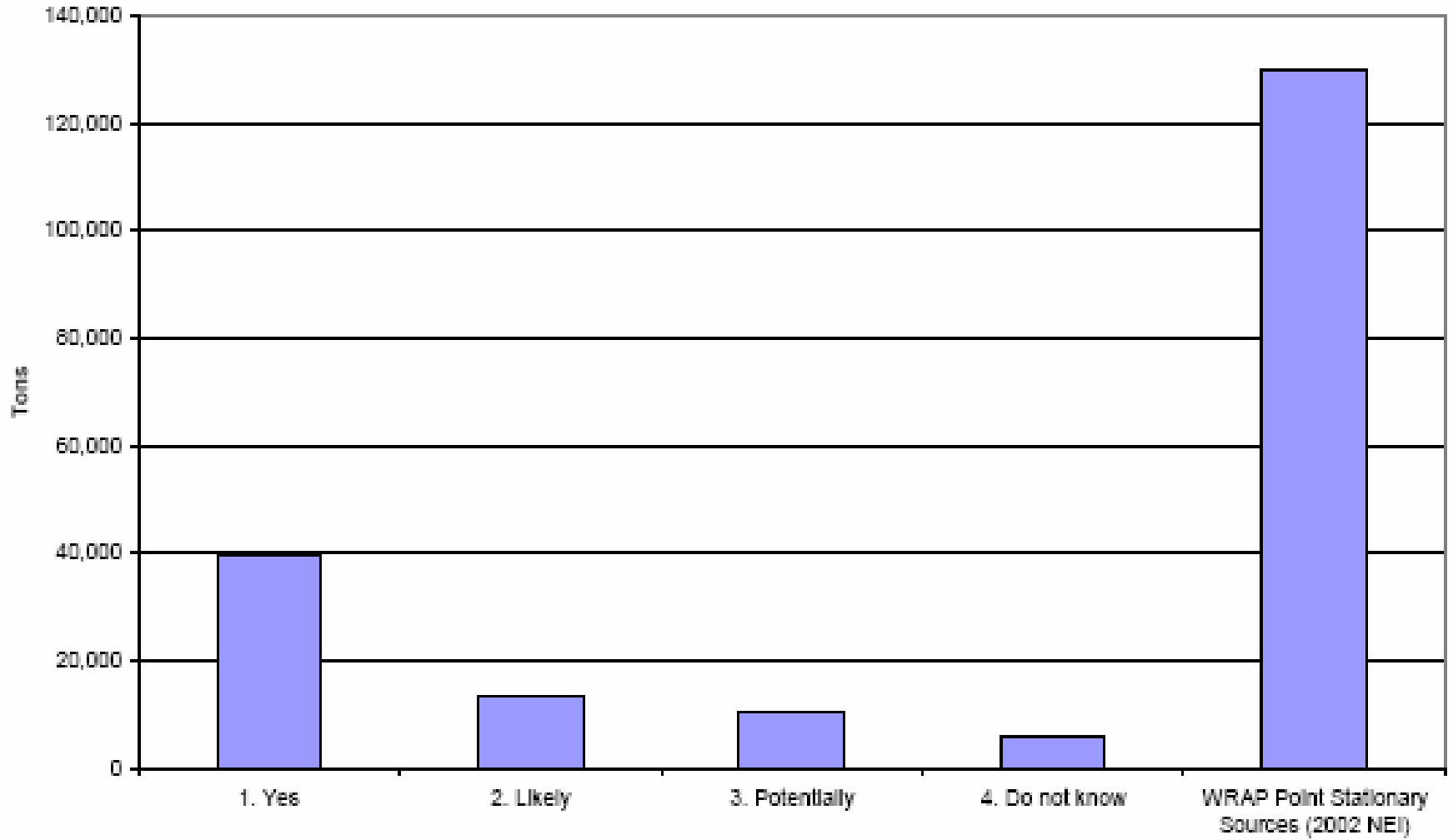


Figure 3-6. SO<sub>2</sub> Emissions from EGUs and Facility-Wide Emissions from non-EGUs by Certainty of BART-eligibility and Other Sources in the WRAP Region (2002 Emissions)

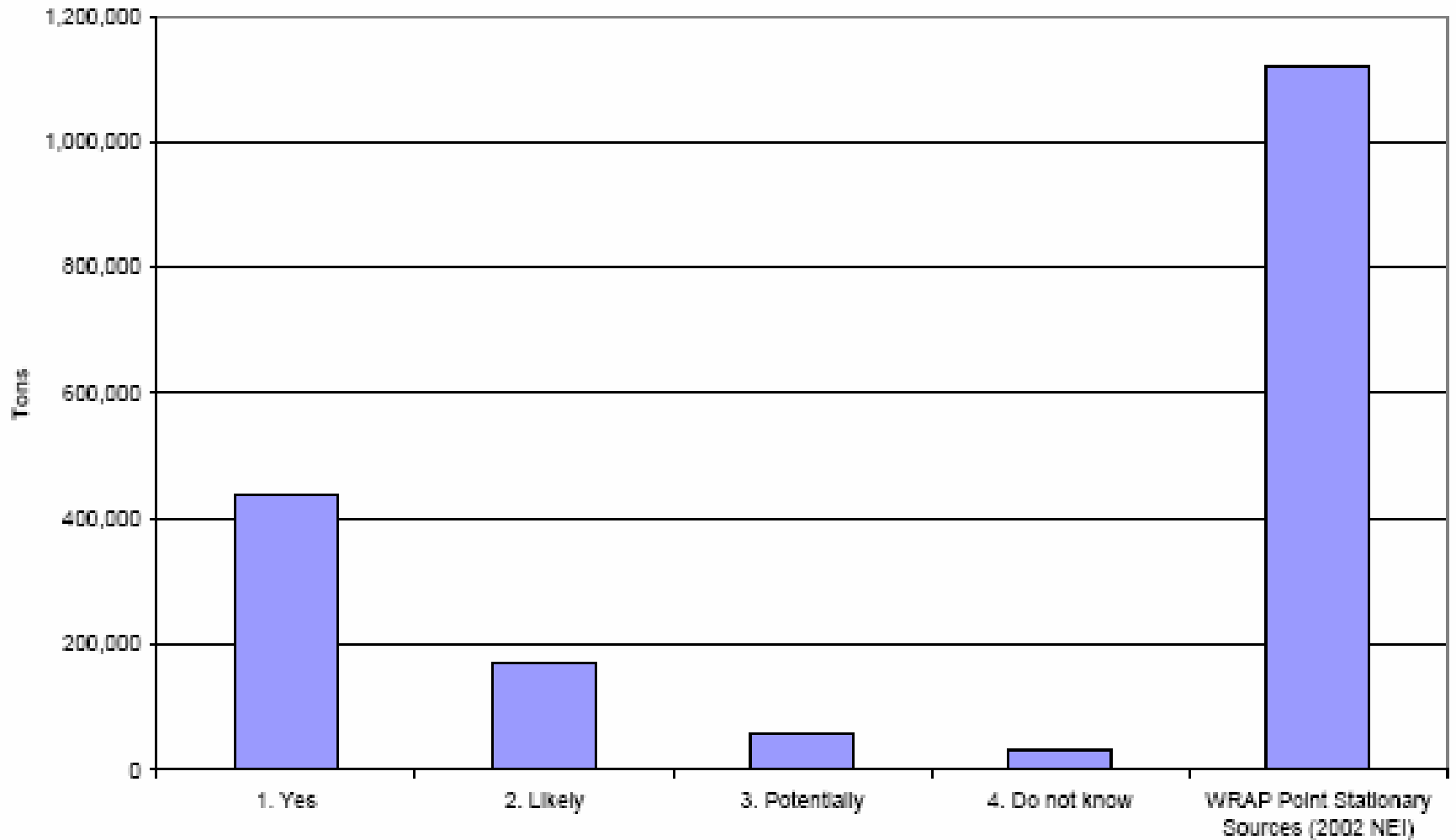


Figure 3-7. VOC Facility-Wide Emissions from Possibly BART-Eligible and Other Sources in the WRAP Region (2002 Emissions)

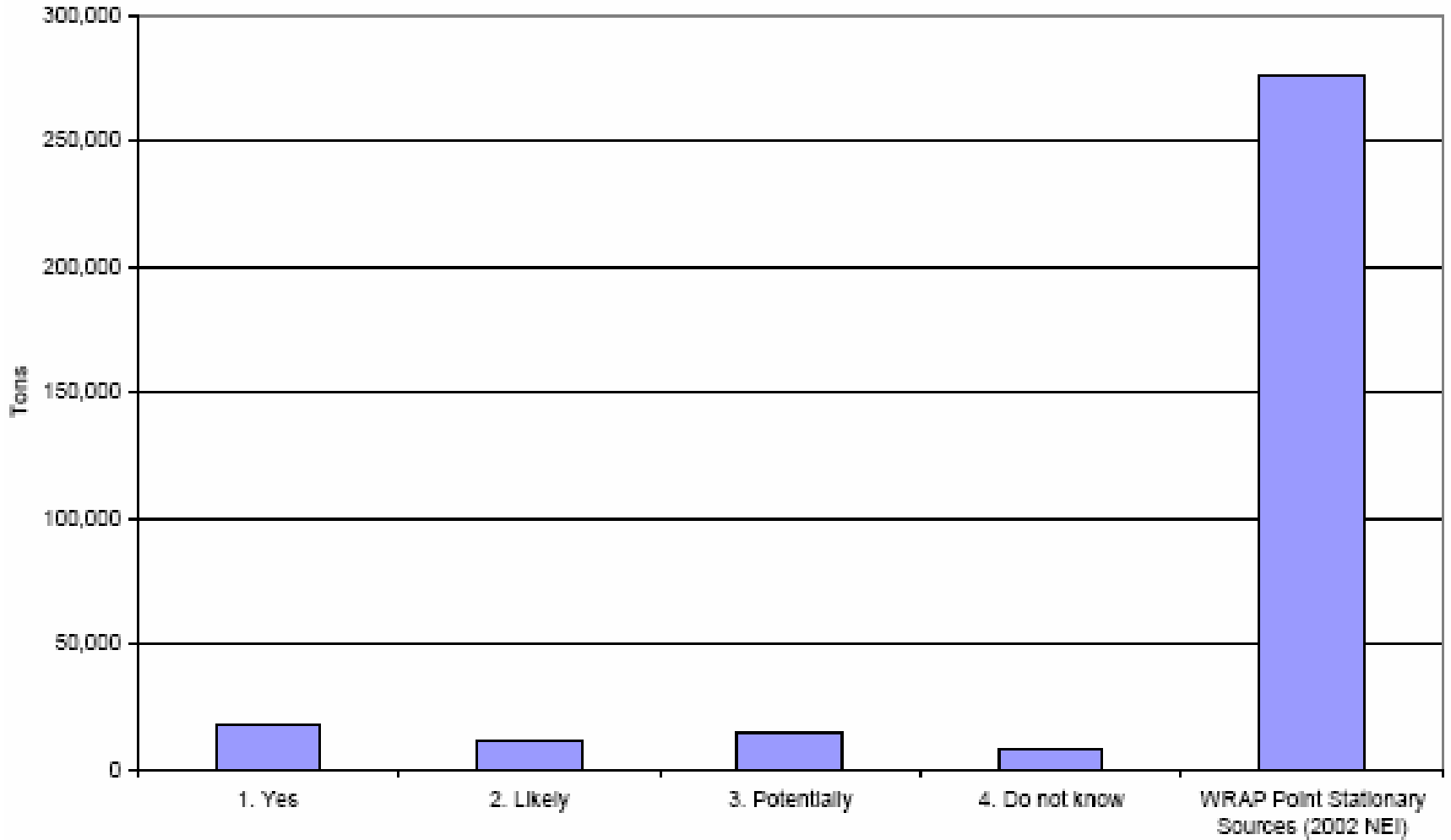
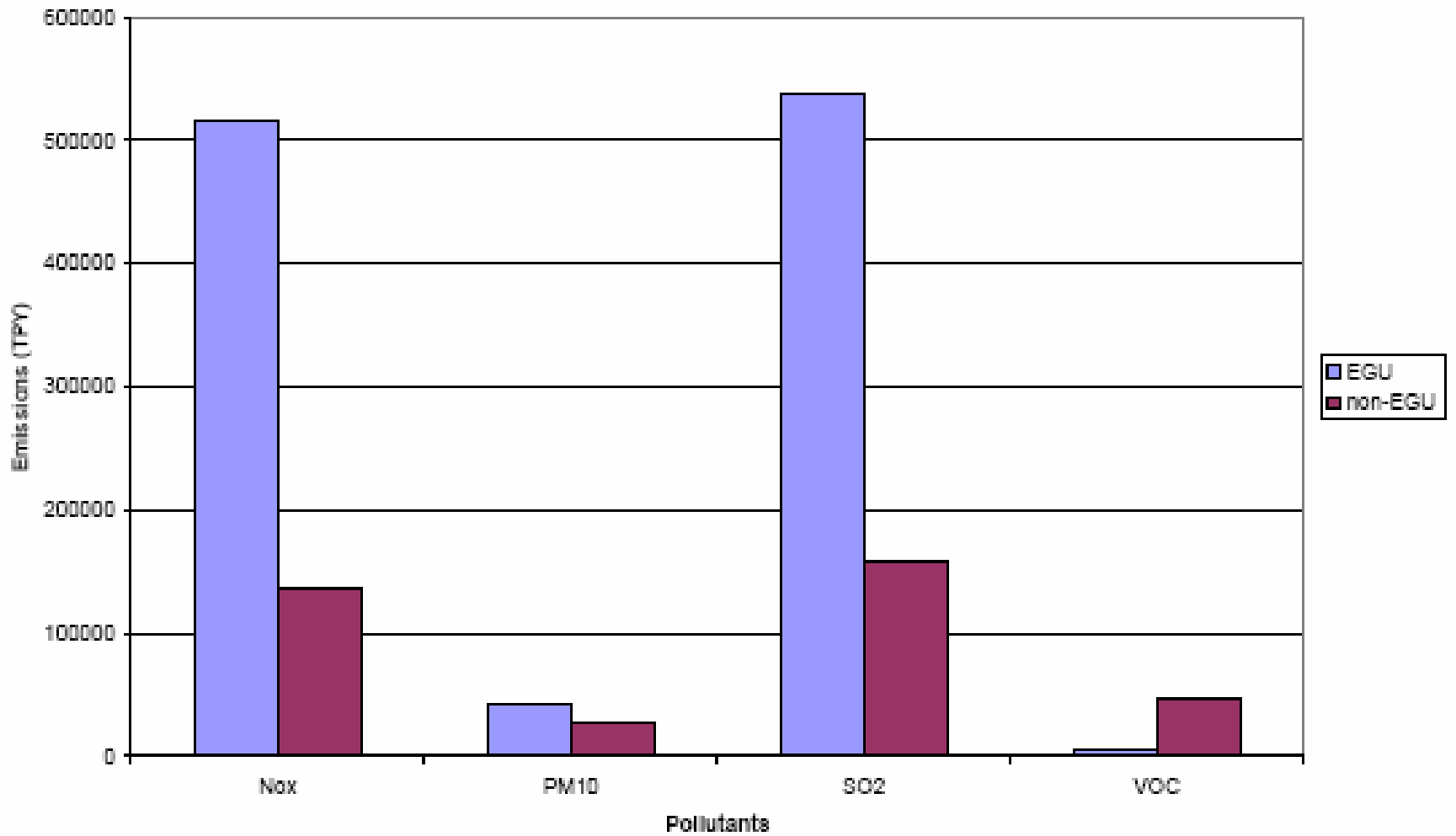


Figure 3-8. Comparison of Emissions from EGU Units and Non-EGU Sources ("Yes", "Likely", "Potential", and "Do Not Know" Levels of Certainty of BART-eligibility)



# Summary

- Approx 1,500 facilities were initially considered
- Approx 1,100 were determined to be ineligible
- Not including CA, 242 facilities were found to be eligible or possibly-eligible
  - 87 of these appear eligible (yes)
  - The rest are likely, potentially, or don't know
- Most of the tons are in the yes category
  - Note, these tons include total, facility-wide emissions for non-EGUs, some of which are from ineligible units

# Summary

- EGUs are the largest source category for SO<sub>2</sub>, NO<sub>x</sub>, and PM<sub>10</sub>
  - Other significant source categories may include petroleum refineries, aluminum ore reduction, phosphate rock processing, lime plants, lead smelters, industrial boilers, cement plants, sulfur recovery plants, fuel conversion plants, and kraft pulp mills
- Petroleum refineries are the largest source category for VOC
  - EGUs and kraft pulp mills are also significant

# Next Steps: Short Term

- Check for any sources which may be missing from the eligible or possibly-eligible lists
  - *See Section 4.1 of draft report for guidance*
- Provide comments to Lee Alter ([lalter@westgov.org](mailto:lalter@westgov.org)) by May 13, especially regarding ...
  - Missing eligible or possibly-eligible sources
  - Quality and clarity of report
  - Adequacy of methods
  - Presentation of results
- Revise report and list of sources as necessary in response to comments and final EPA BART rule

# Next Steps: 2005

- Finish resolving EGUs at the unit level
- For non-EGUs, resolve the status of facilities which are possibly BART-eligible
  - To determine specifically which facilities need to be further analyzed for BART or included in alt. program
  - To determine specifically which source categories ...
    - need to be included in a BART-like analysis to demonstrate an alternative is better than BART
    - need to be analyzed for suitability in trading program
  - Start with largest sources first

# Next Steps: 2005

- Once possibly-eligible sources are resolved as either eligible or ineligible, determine which part of the eligible facilities are BART-eligible
  - Extent/rigor of analysis (e.g., which units are researched) may depend on whether an alternative to BART is implemented, and if so, what is sufficient to demonstrate that it is better than BART
  - Start with largest sources first

# Next Steps: 2005

- Maintain and update list as source-specific issues and eligibility are resolved
- States/tribes act as conduits between owners/operators and regional BART list
- Improve data on current controls in place
- Possible integration with WRAP Emission Data Management System (EDMS)