

US EPA ARCHIVE DOCUMENT

Appendix K
HAPEM4 Results

Statewide Exposure Concentration Estimate Charts / Percent Contribution Charts

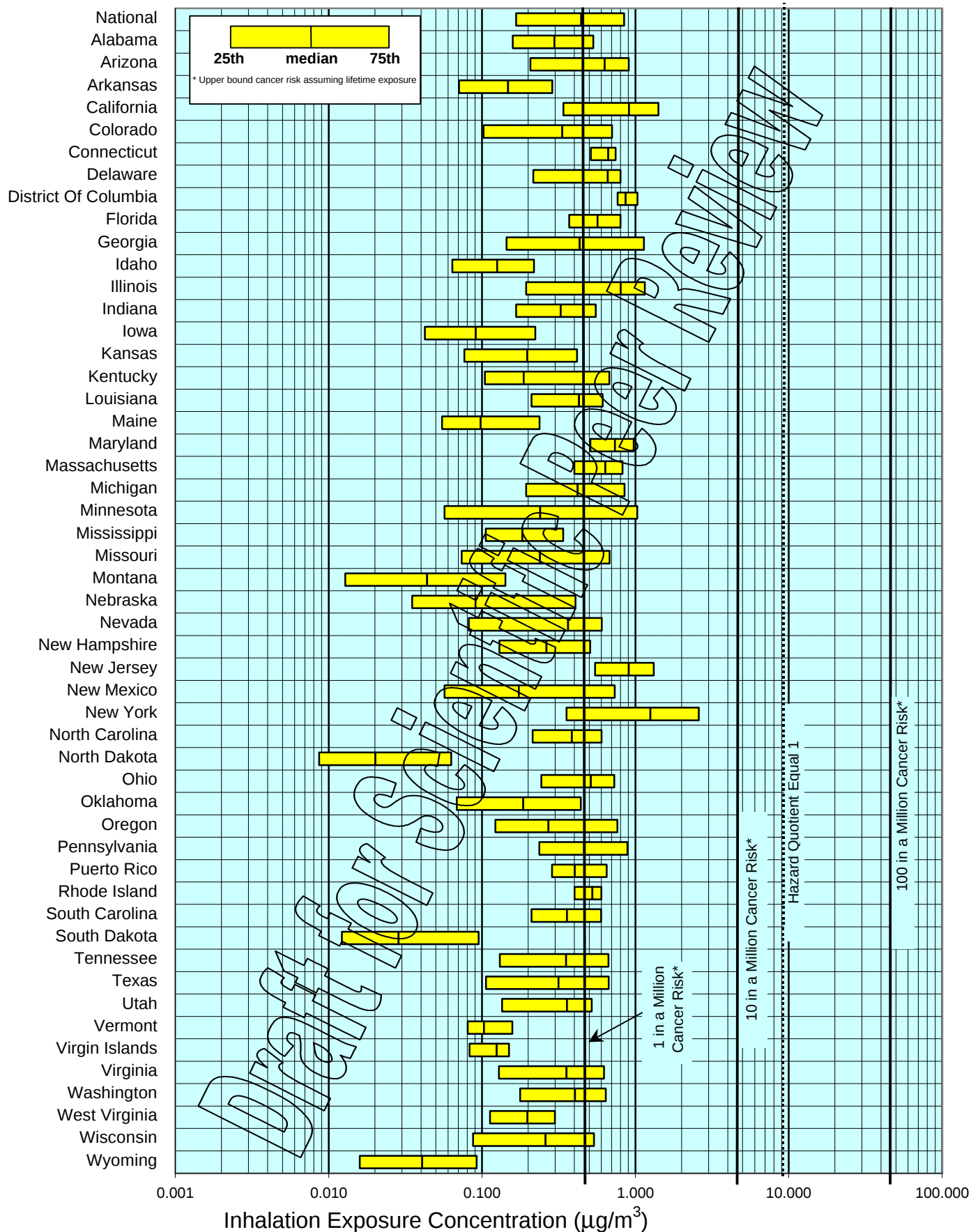
(Charts presented in alphabetical order by pollutant)

(The "Page 2" referred to on each chart has been provided at end of the appendix.)

1996 Modeled Exposure Concentrations

Acetaldehyde - Statewide Concentration Distribution Estimates

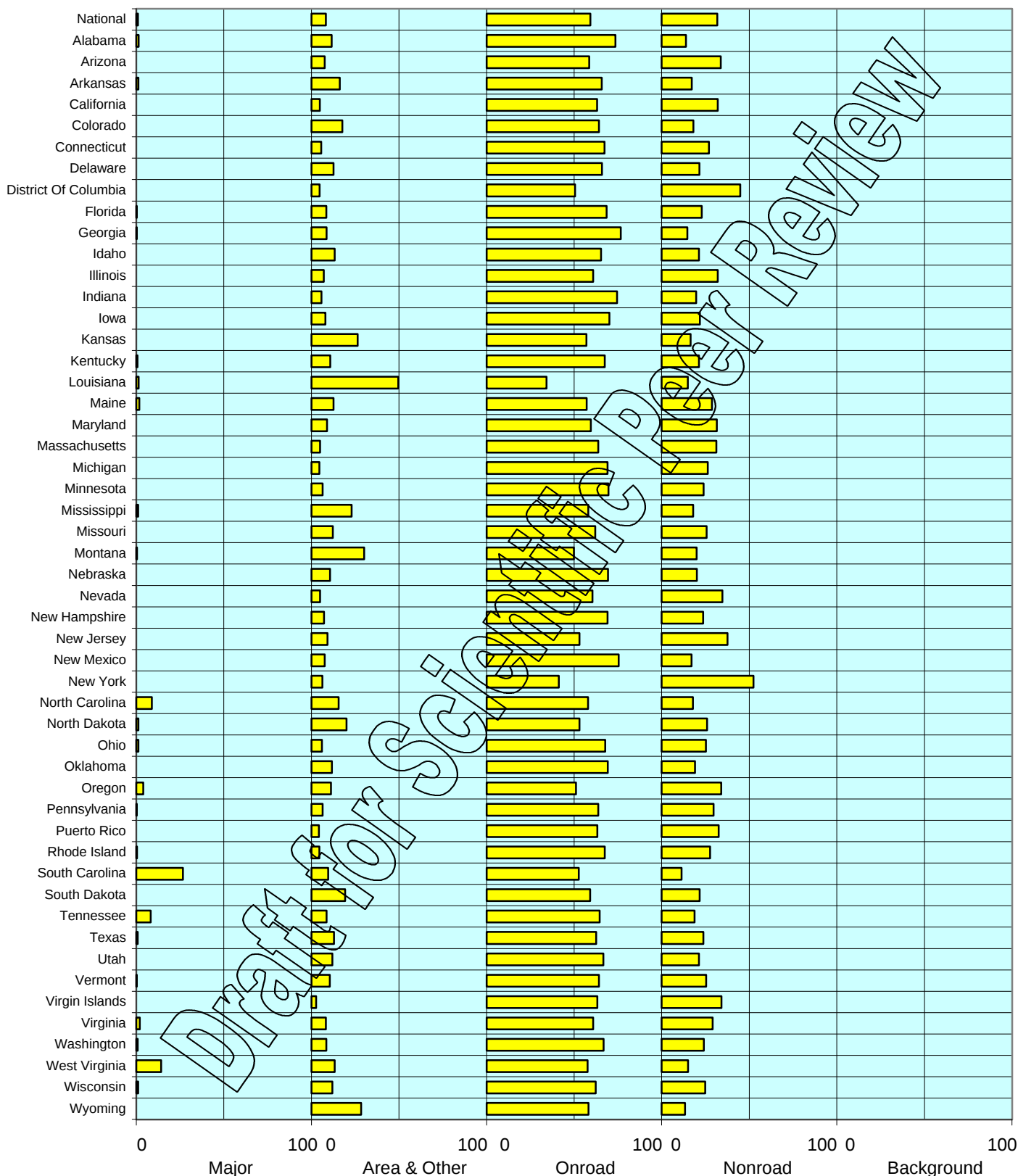
(For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

Acetaldehyde - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

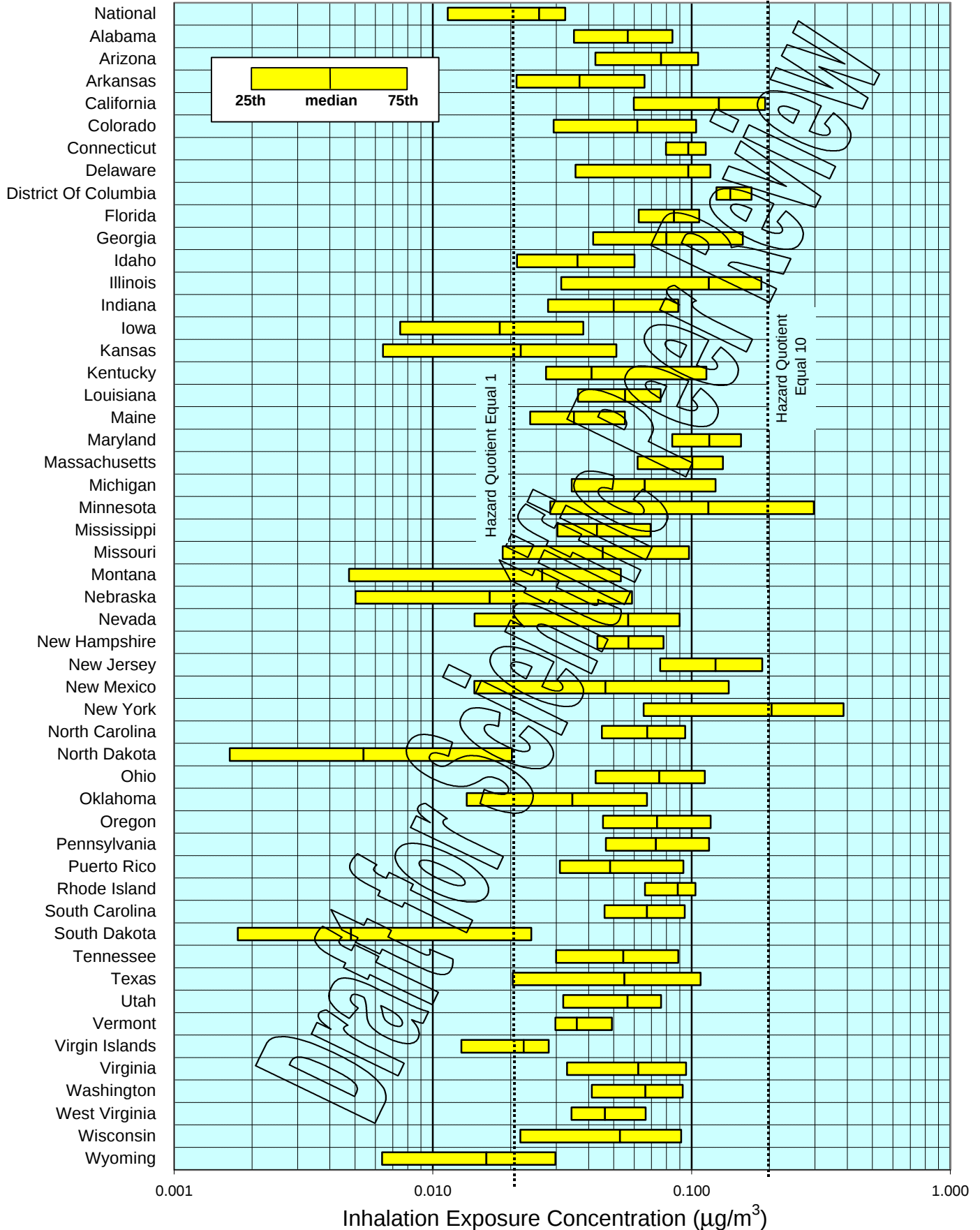


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Acrolein - Statewide Concentration Distribution Estimates

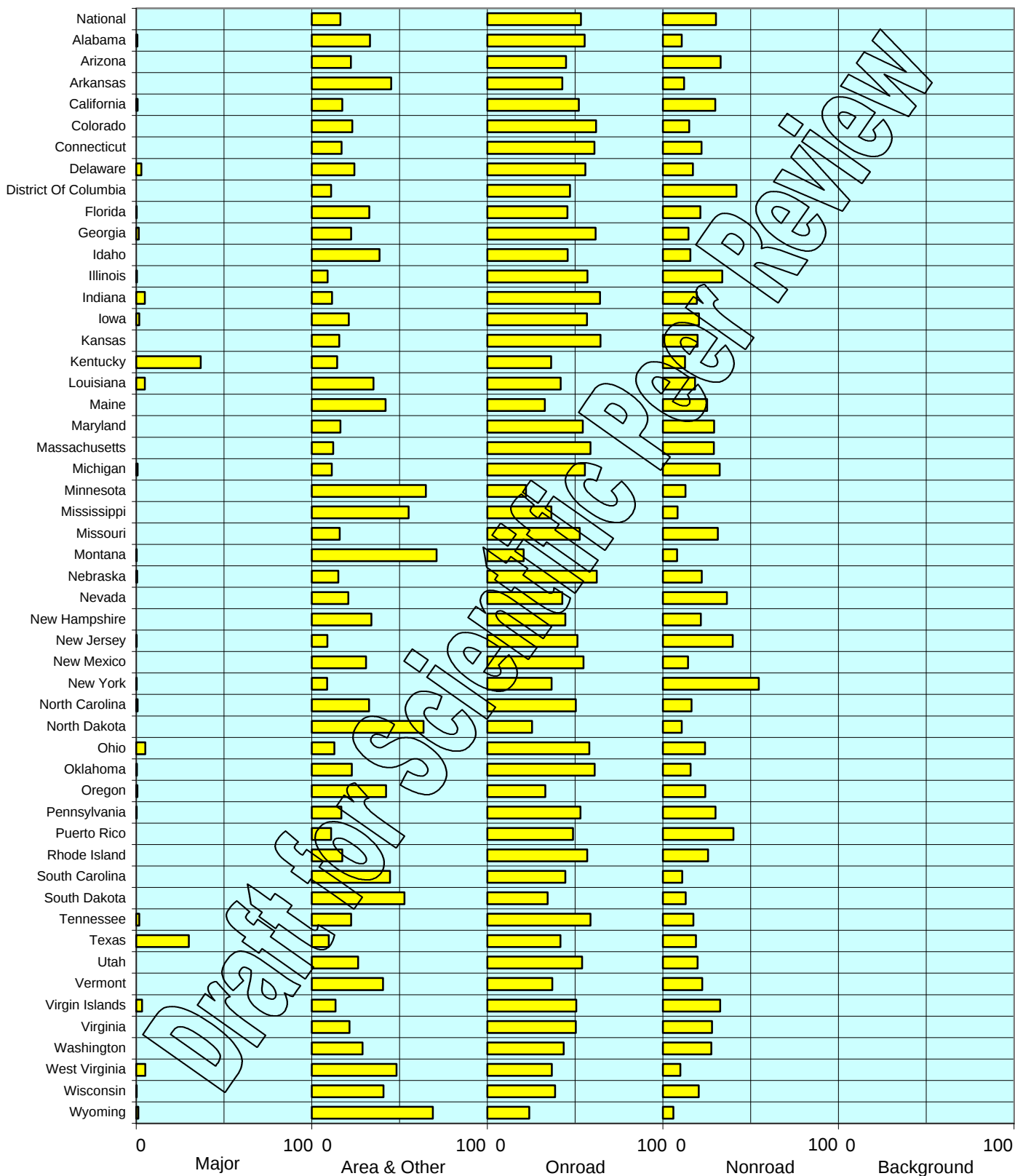
(For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

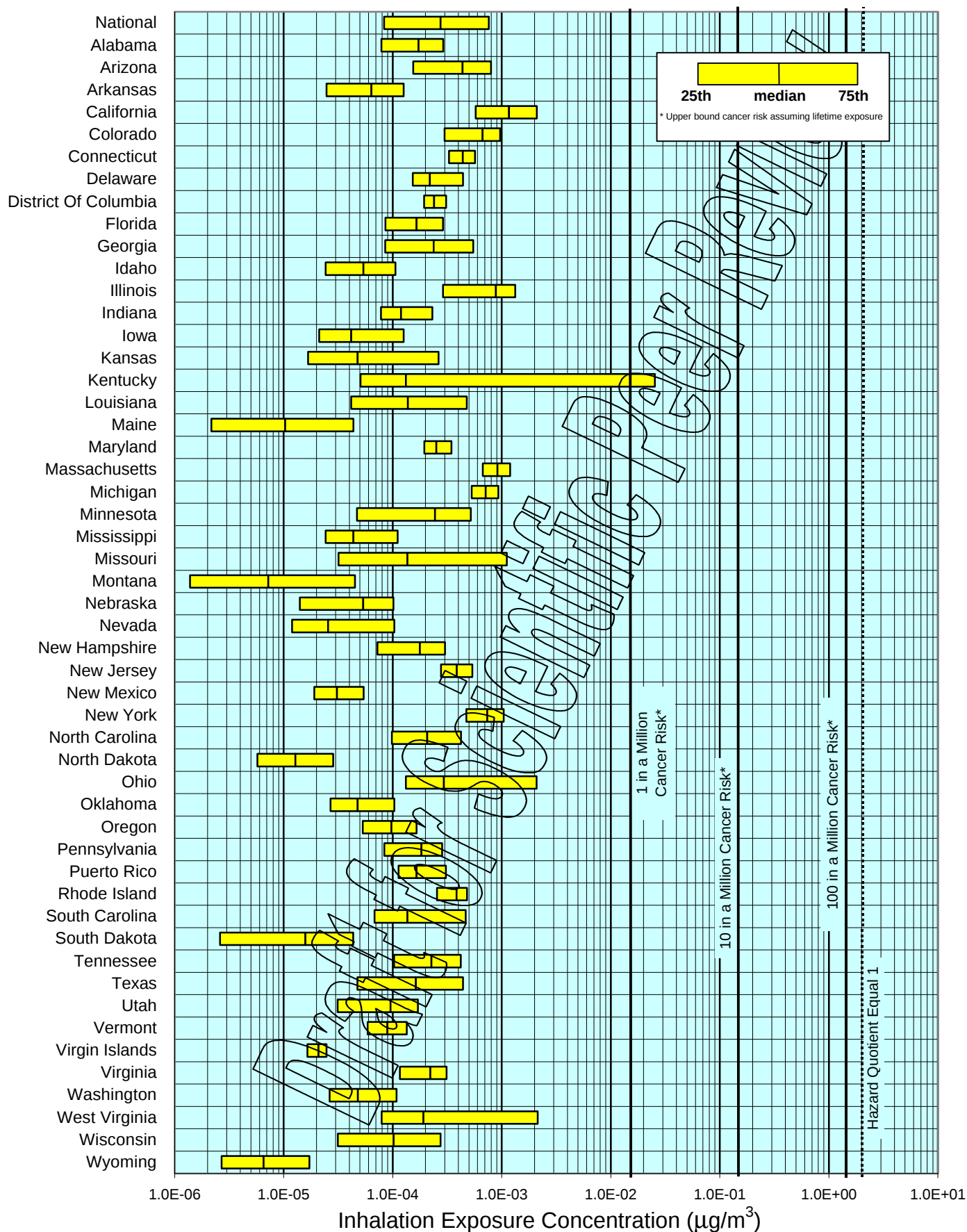
Acrolein - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

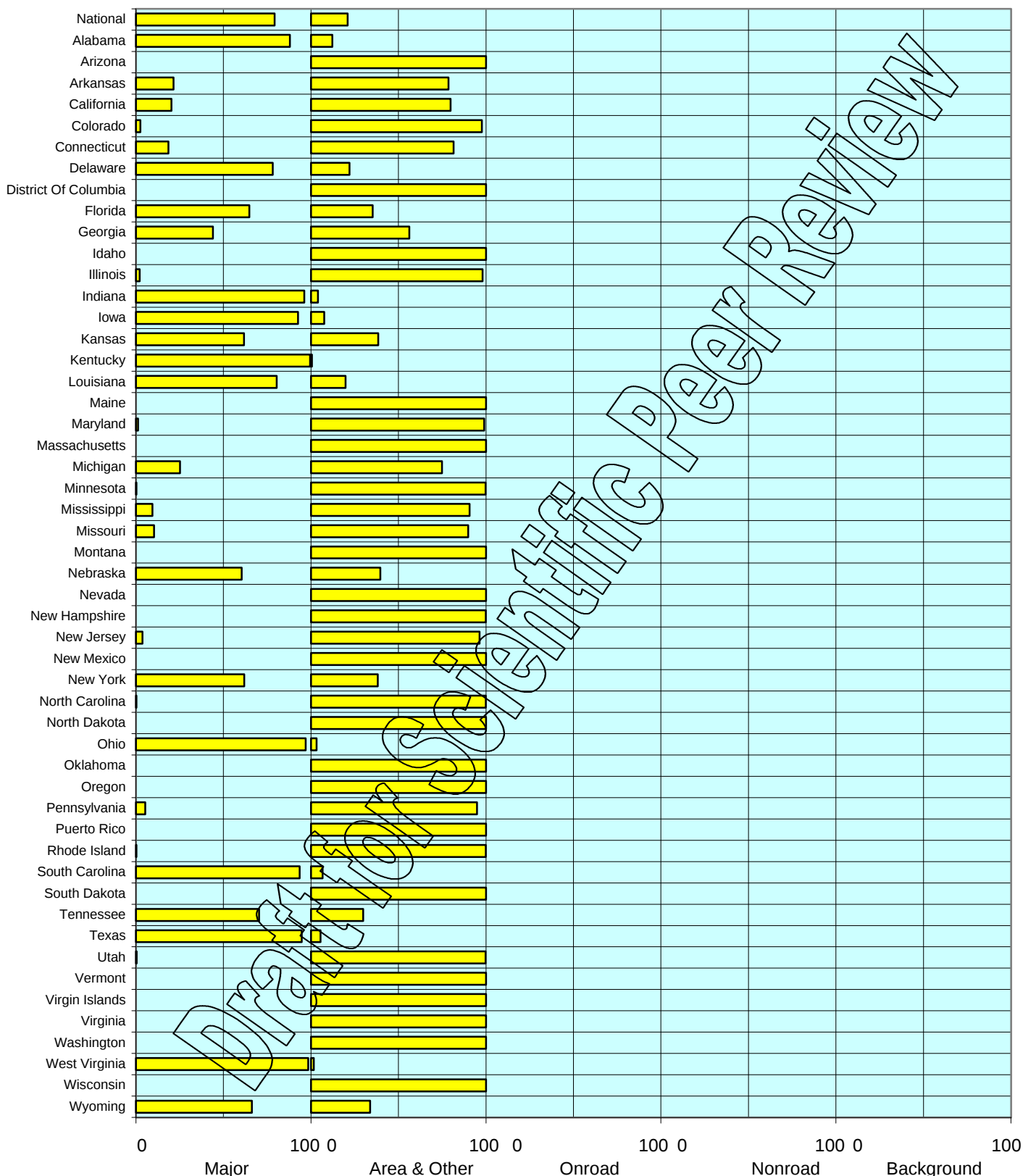
1996 Modeled Exposure Concentrations Acrylonitrile - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

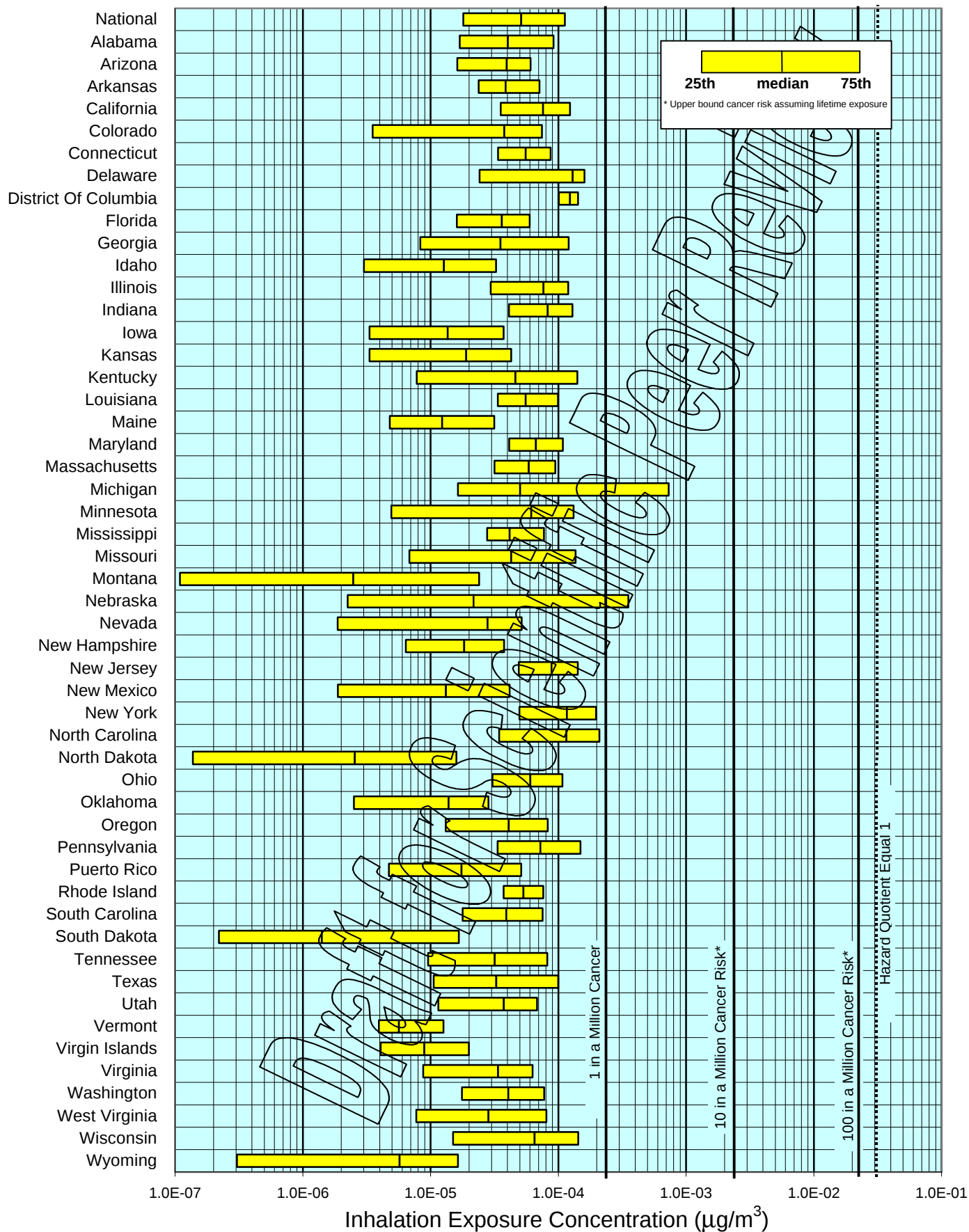
Acrylonitrile - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

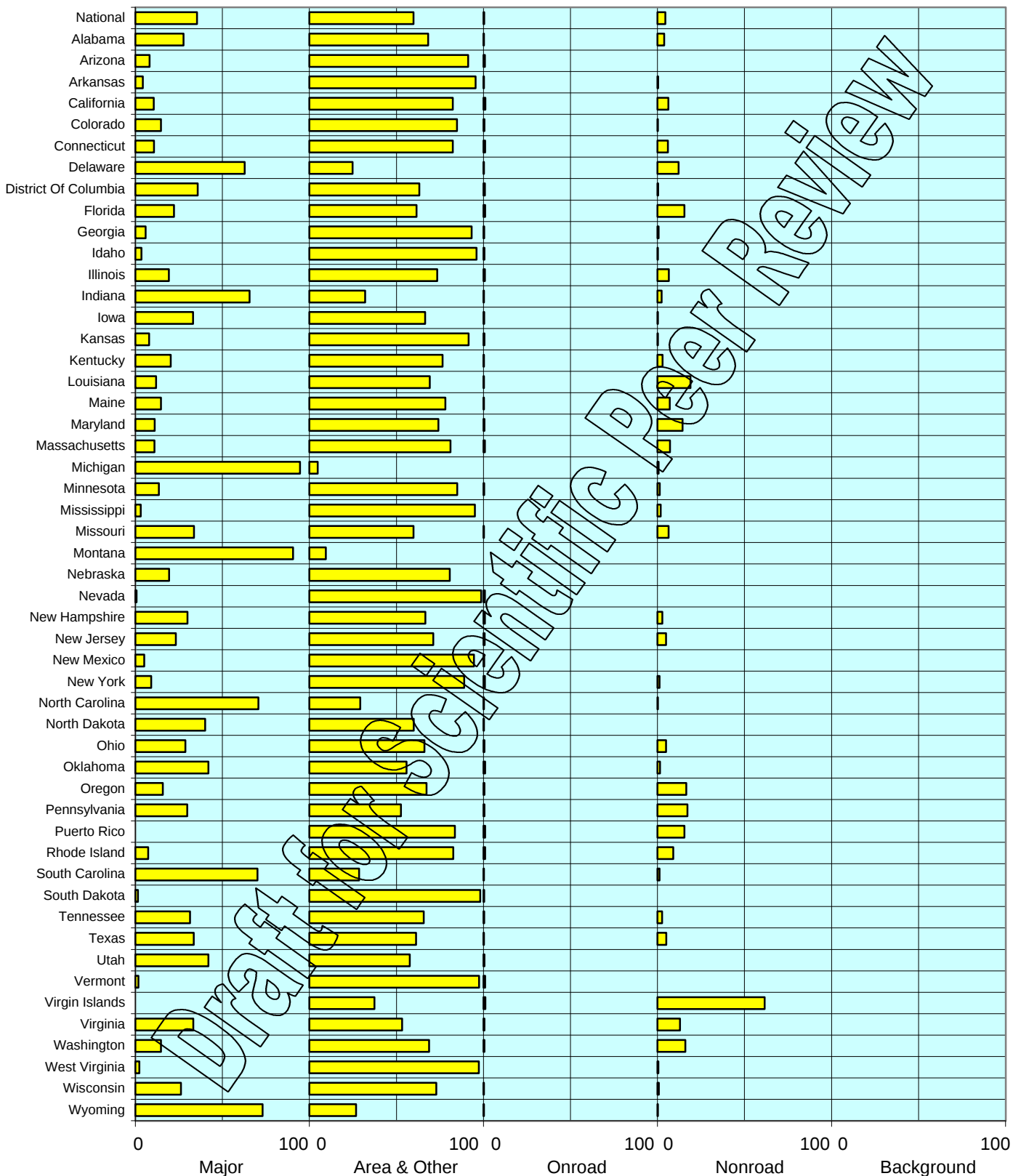


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations Arsenic - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations Arsenic - Statewide Source Sector Contribution Estimates (For Limitations On The Use of These Data See Page 2)

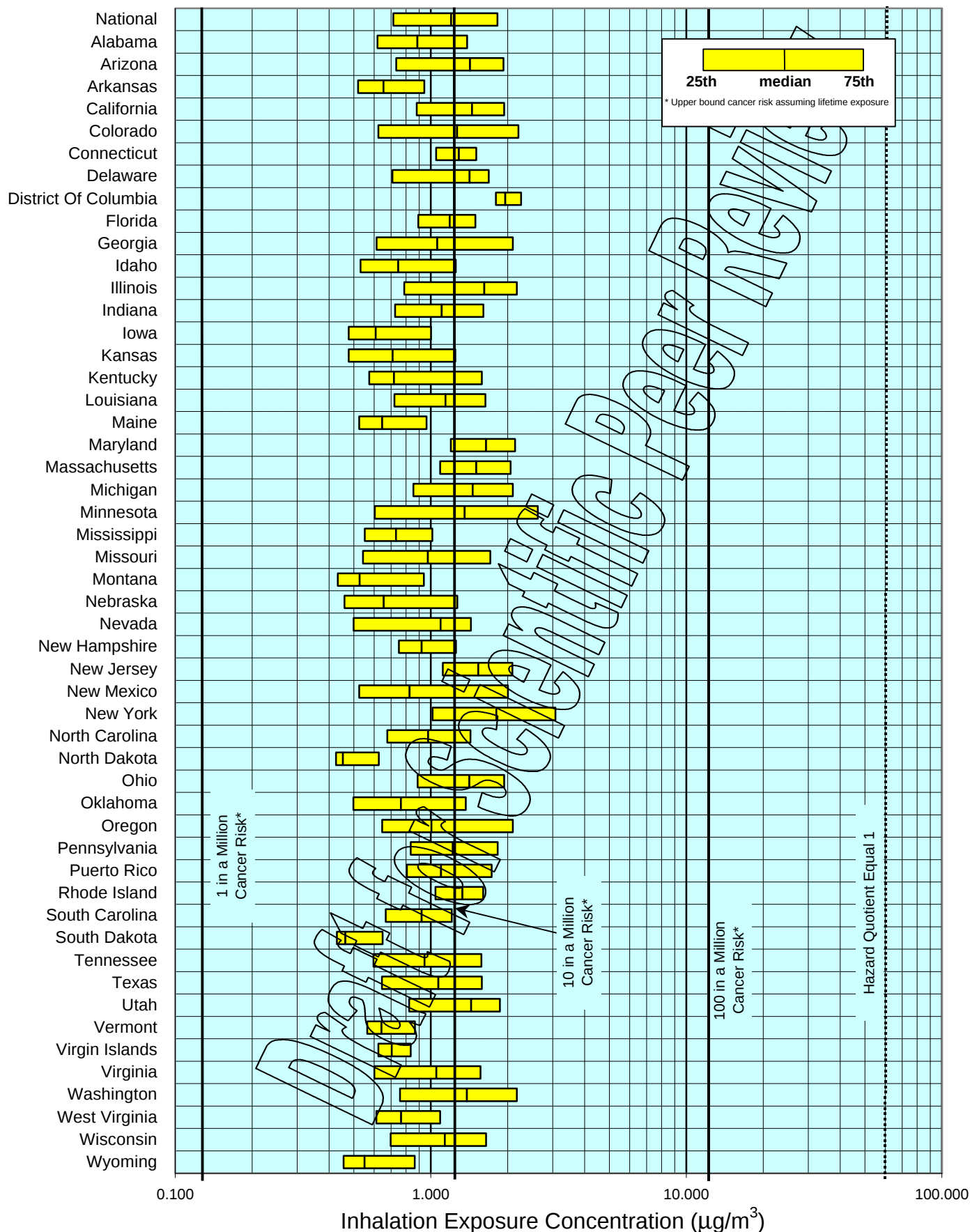


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

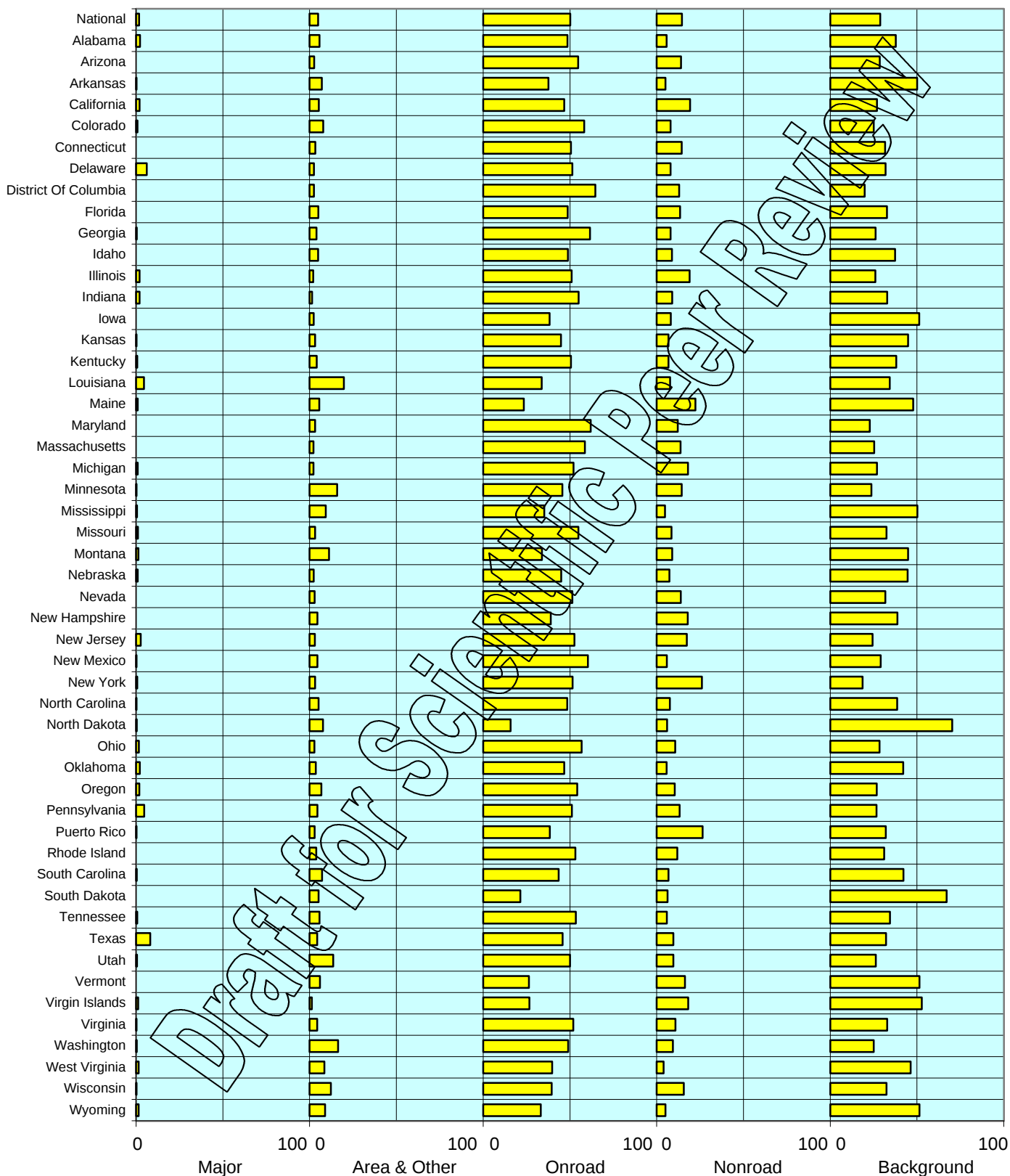
1996 Modeled Exposure Concentrations

Benzene - Statewide Concentration Distribution Estimates

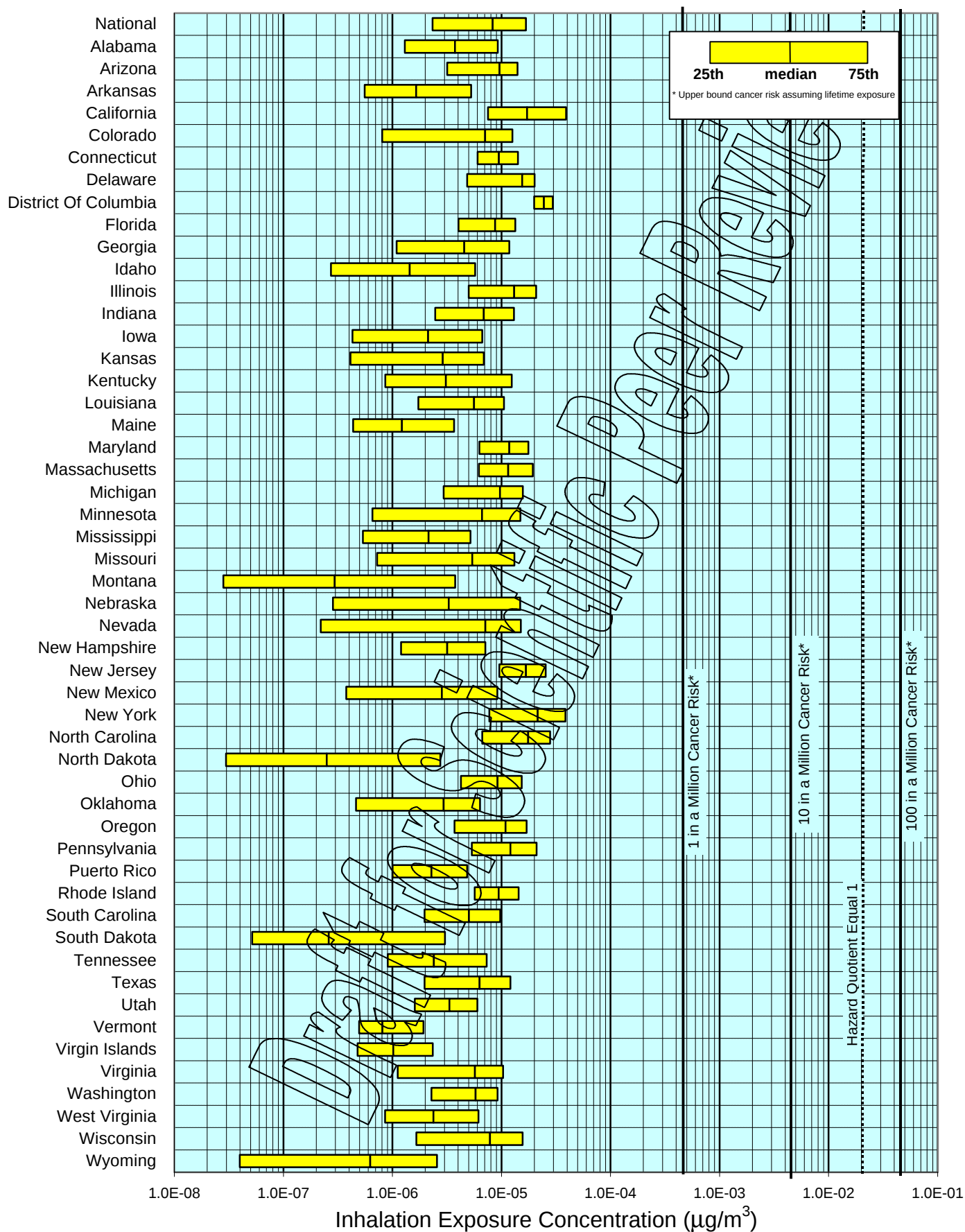
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1996 Modeled Exposure Concentrations
Benzene - Statewide Source Sector Contribution Estimates
(For Limitations On The Use of These Data See Page 2)



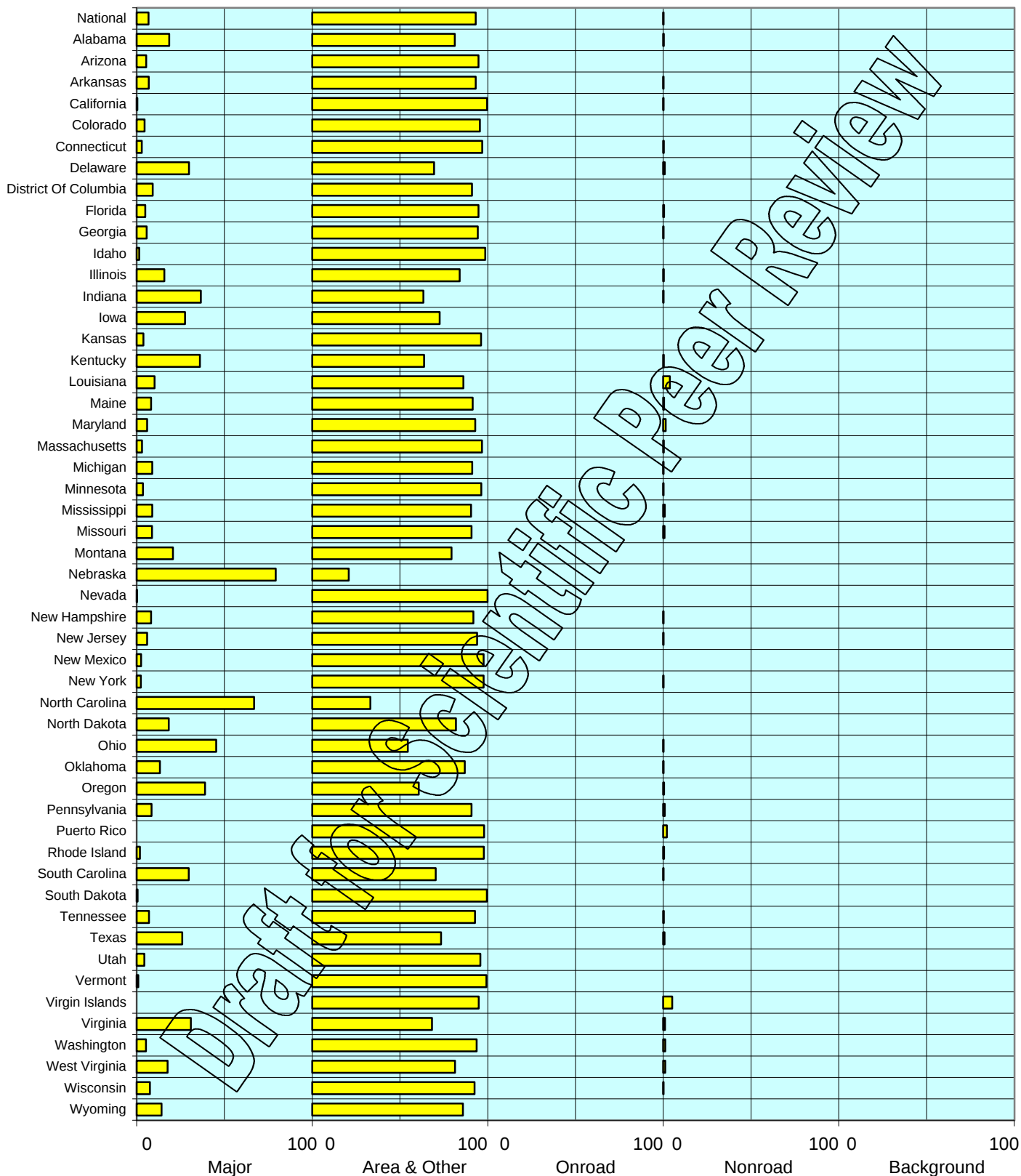
1996 Modeled Exposure Concentrations Beryllium - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

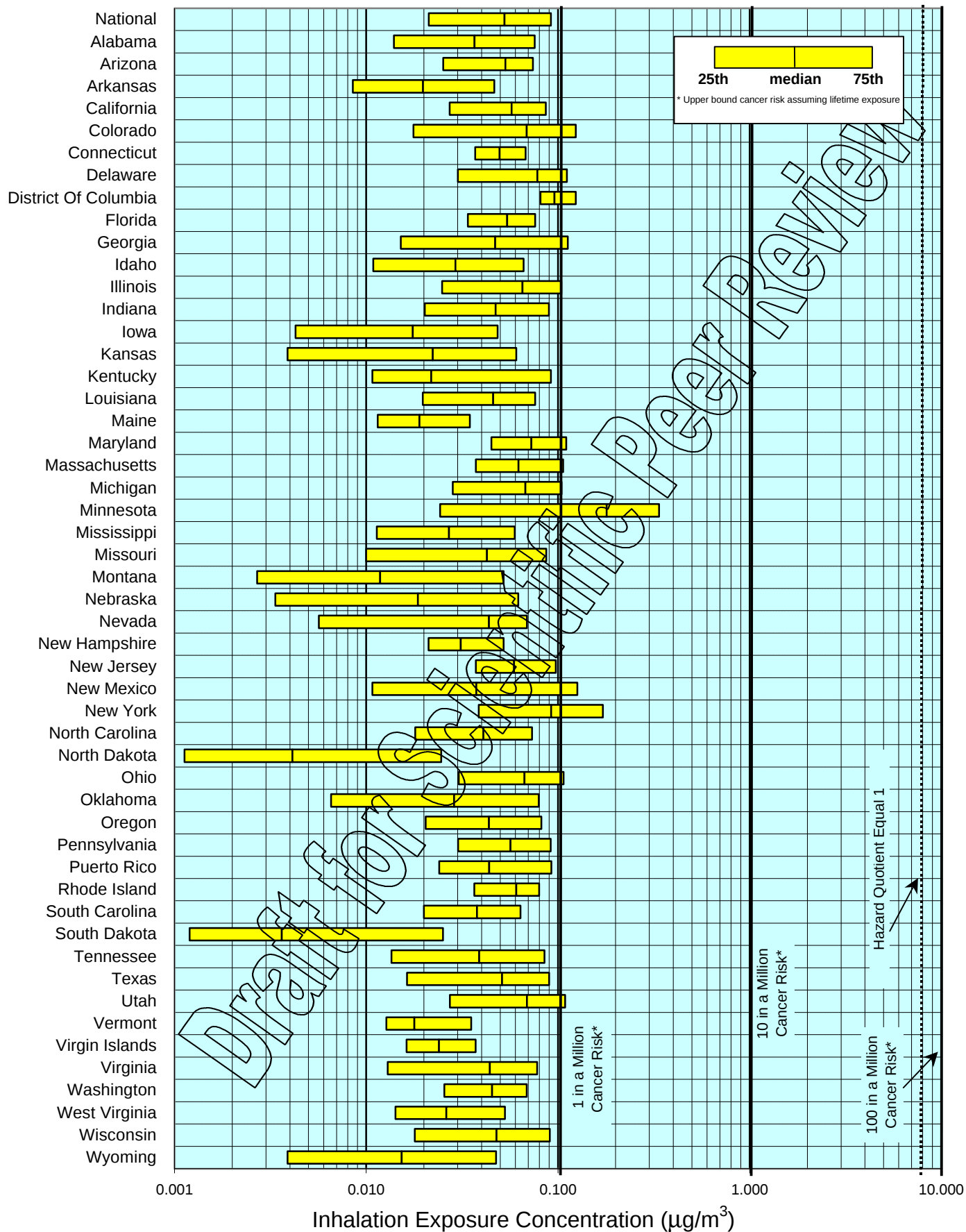
Beryllium - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

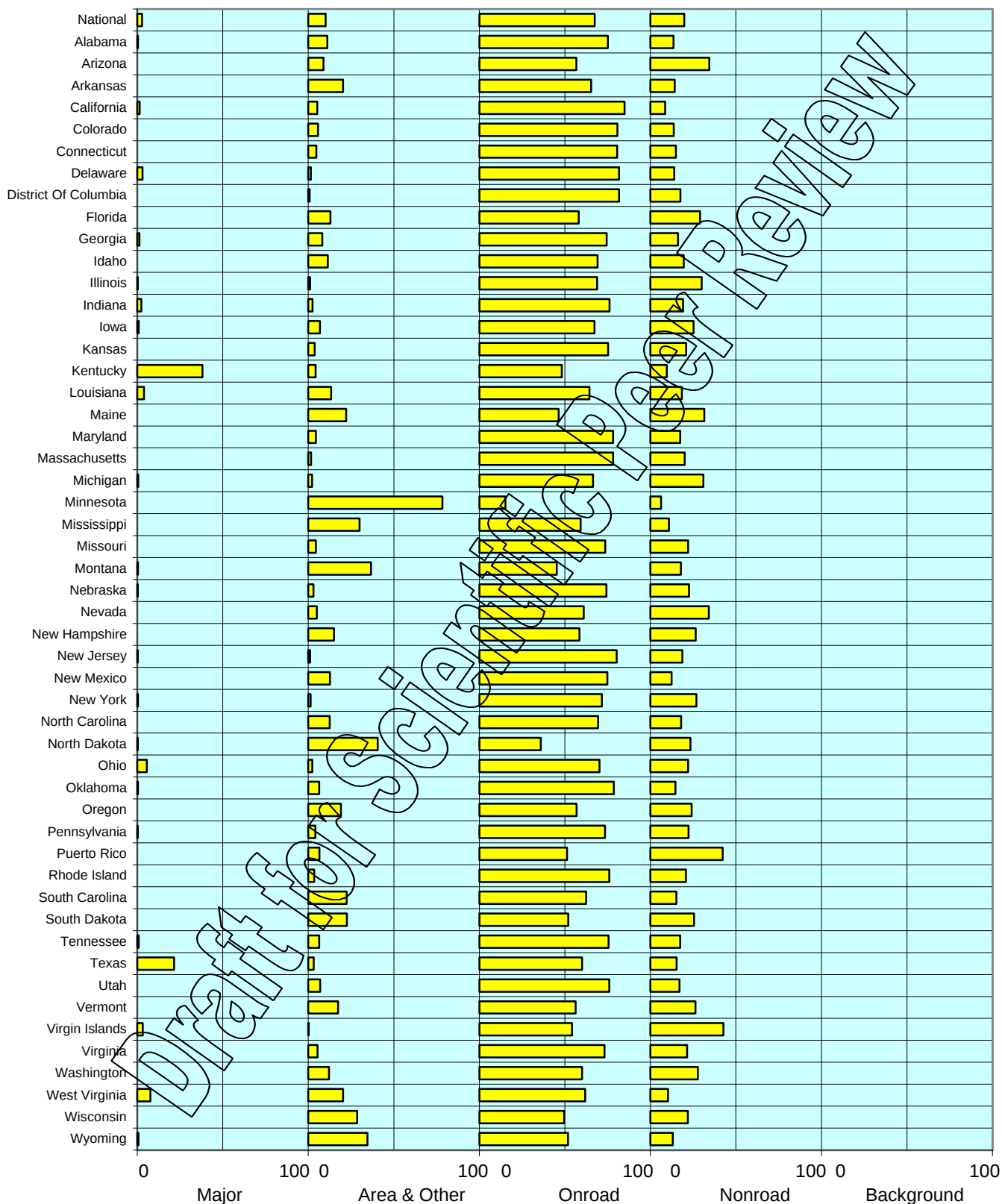


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations 1,3-Butadiene - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations 1,3-Butadiene - Statewide Source Sector Contribution Estimates (For Limitations On The Use of These Data See Page 2)

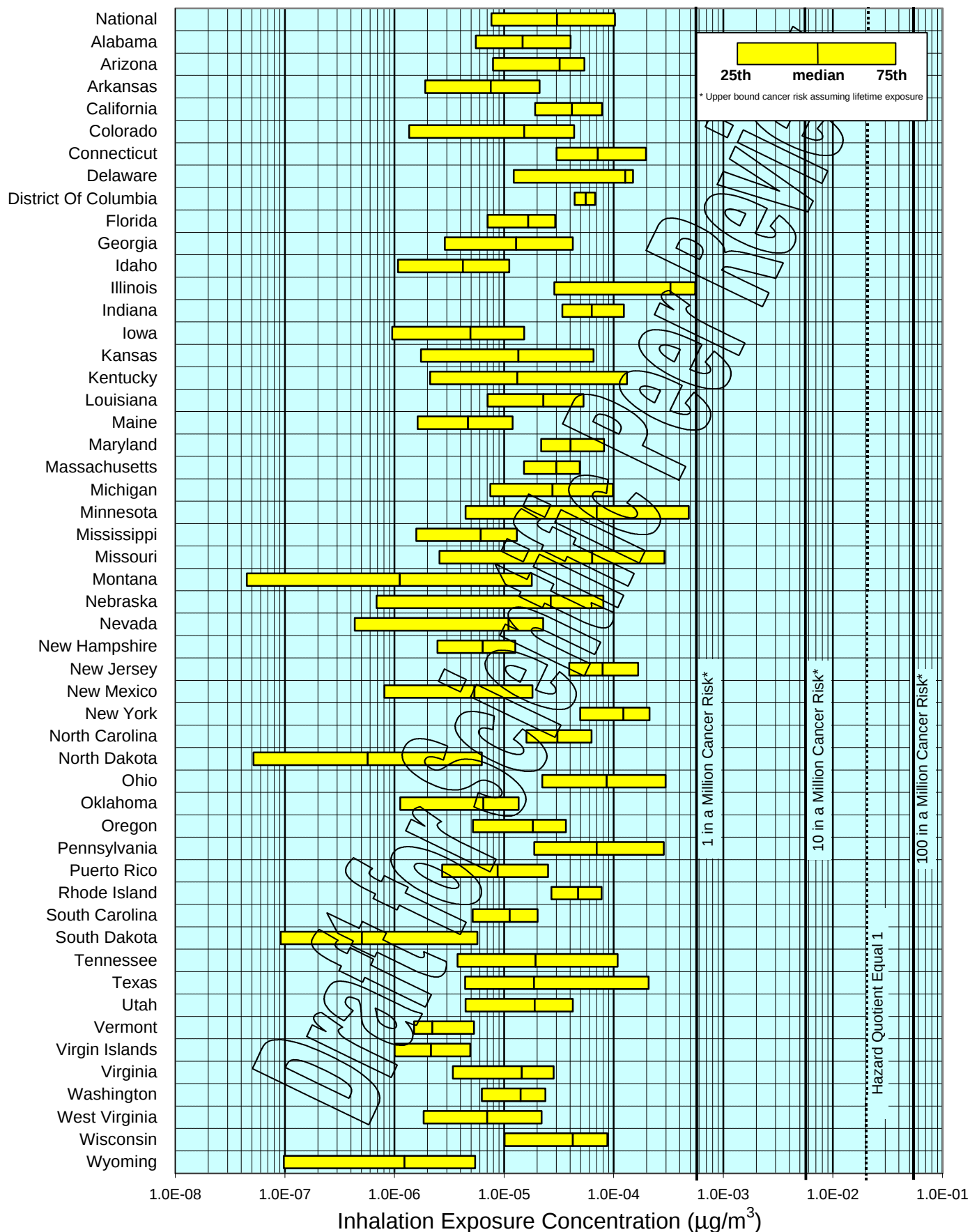


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Cadmium - Statewide Concentration Distribution Estimates

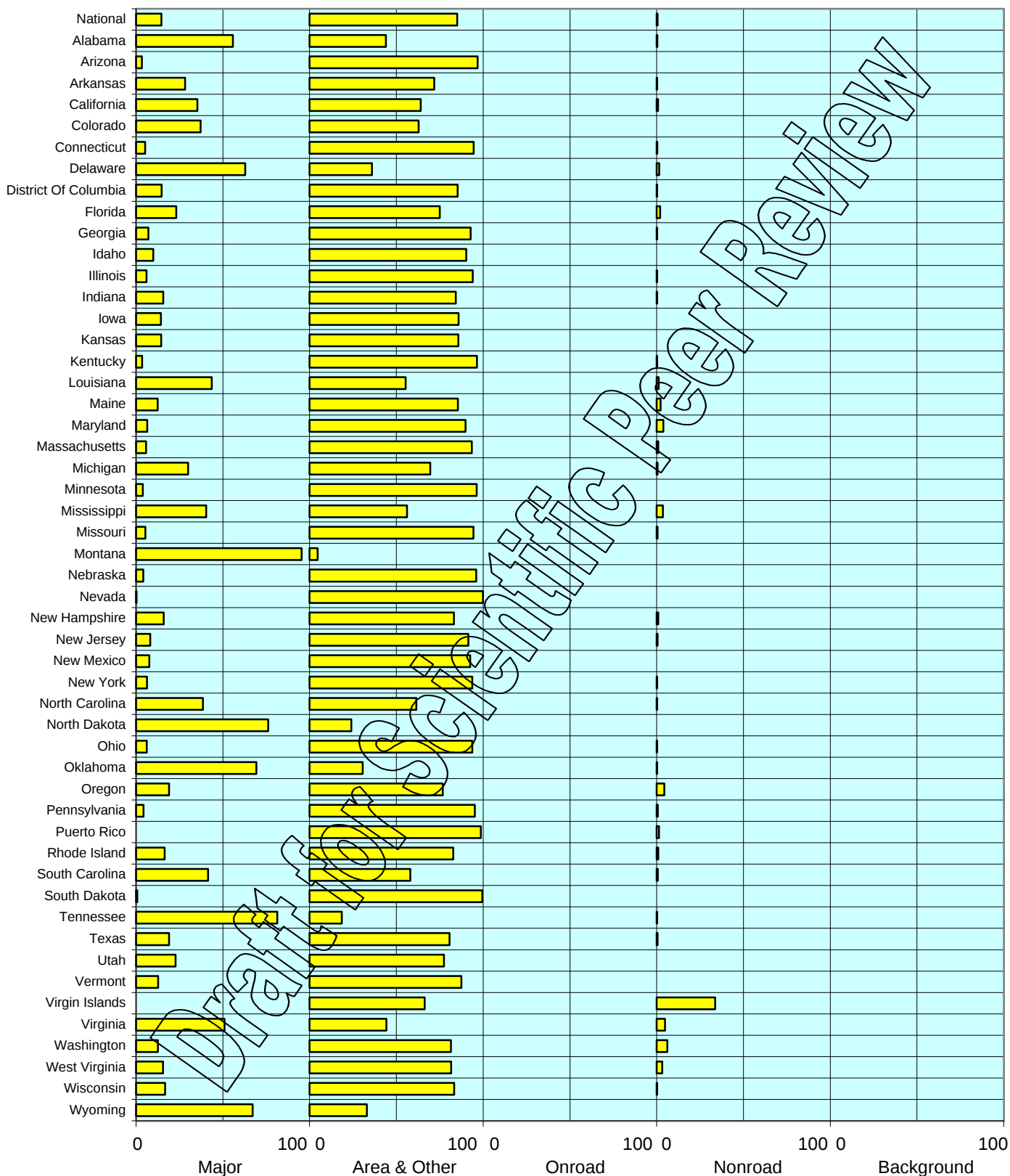
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1996 Modeled Exposure Concentrations

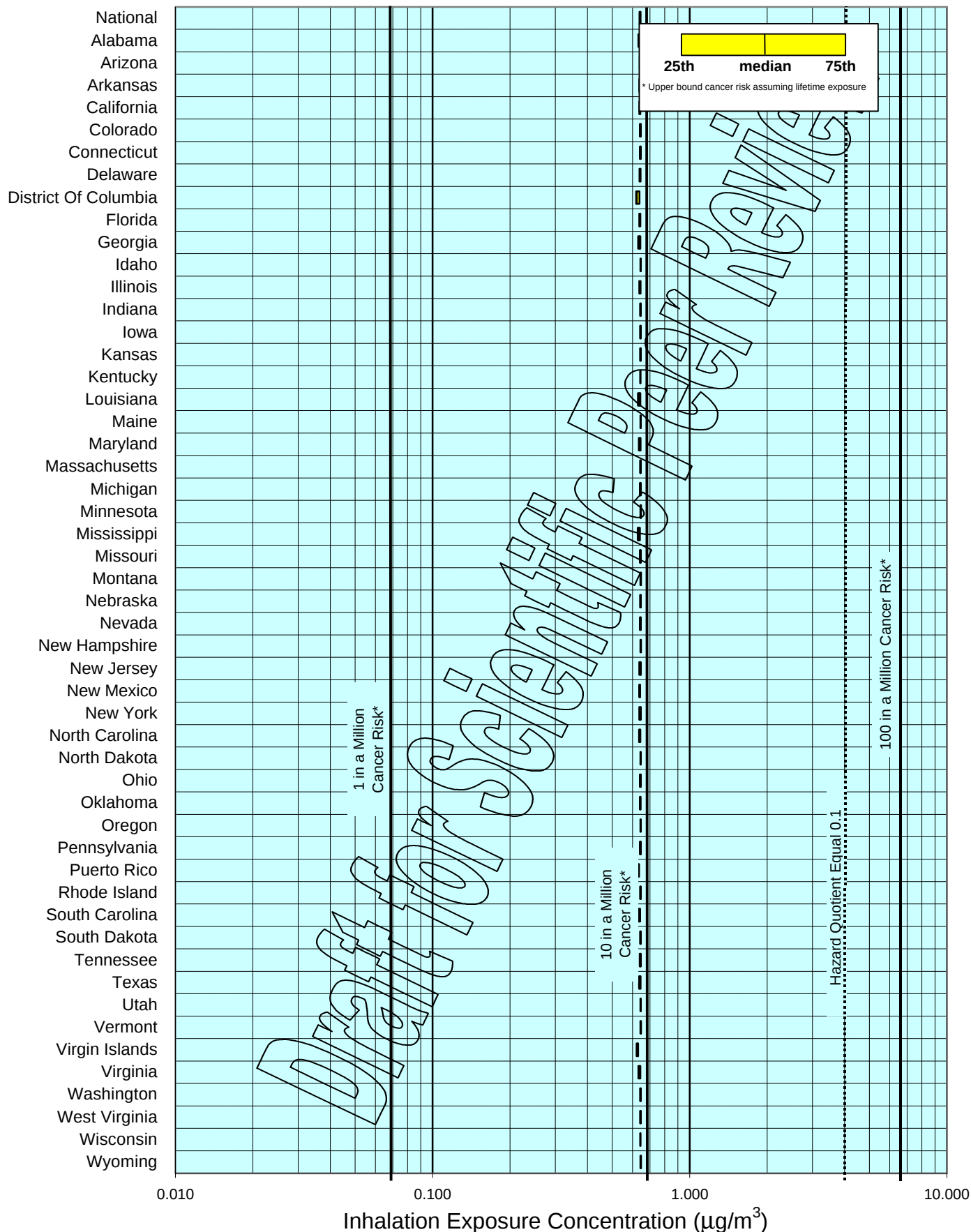
Cadmium - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

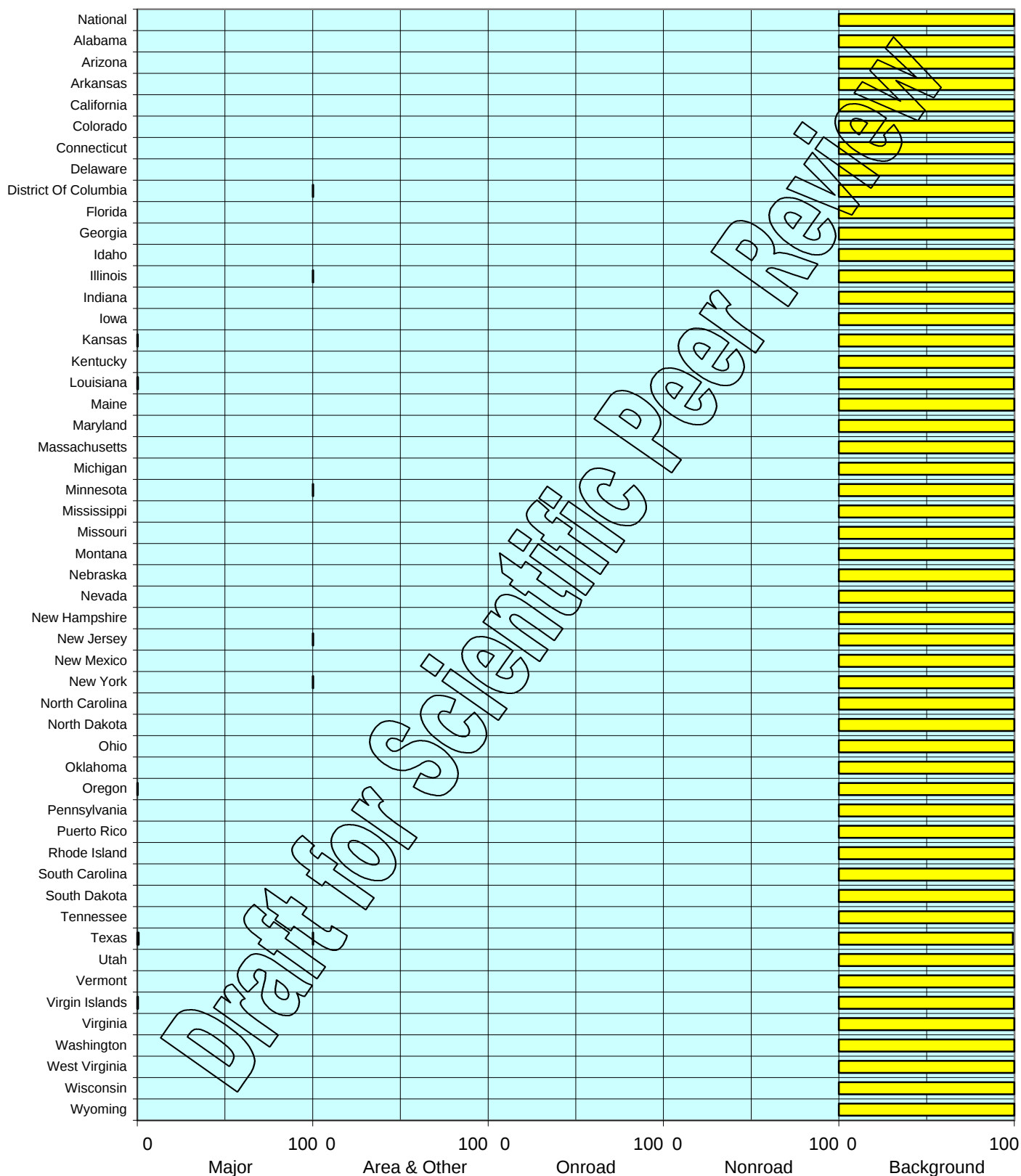
1996 Modeled Exposure Concentrations Carbon Tetrachloride - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

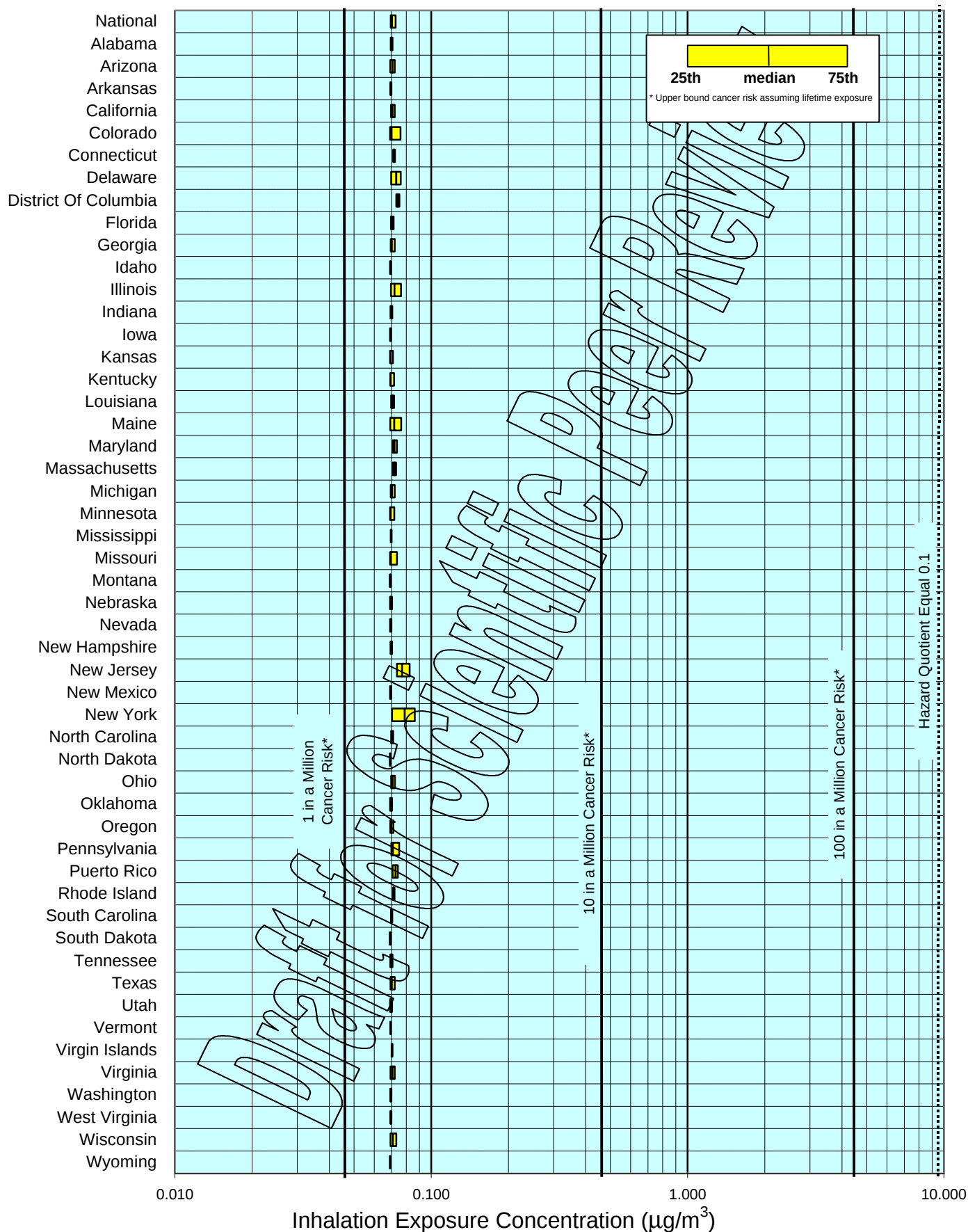
Carbon Tetrachloride - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

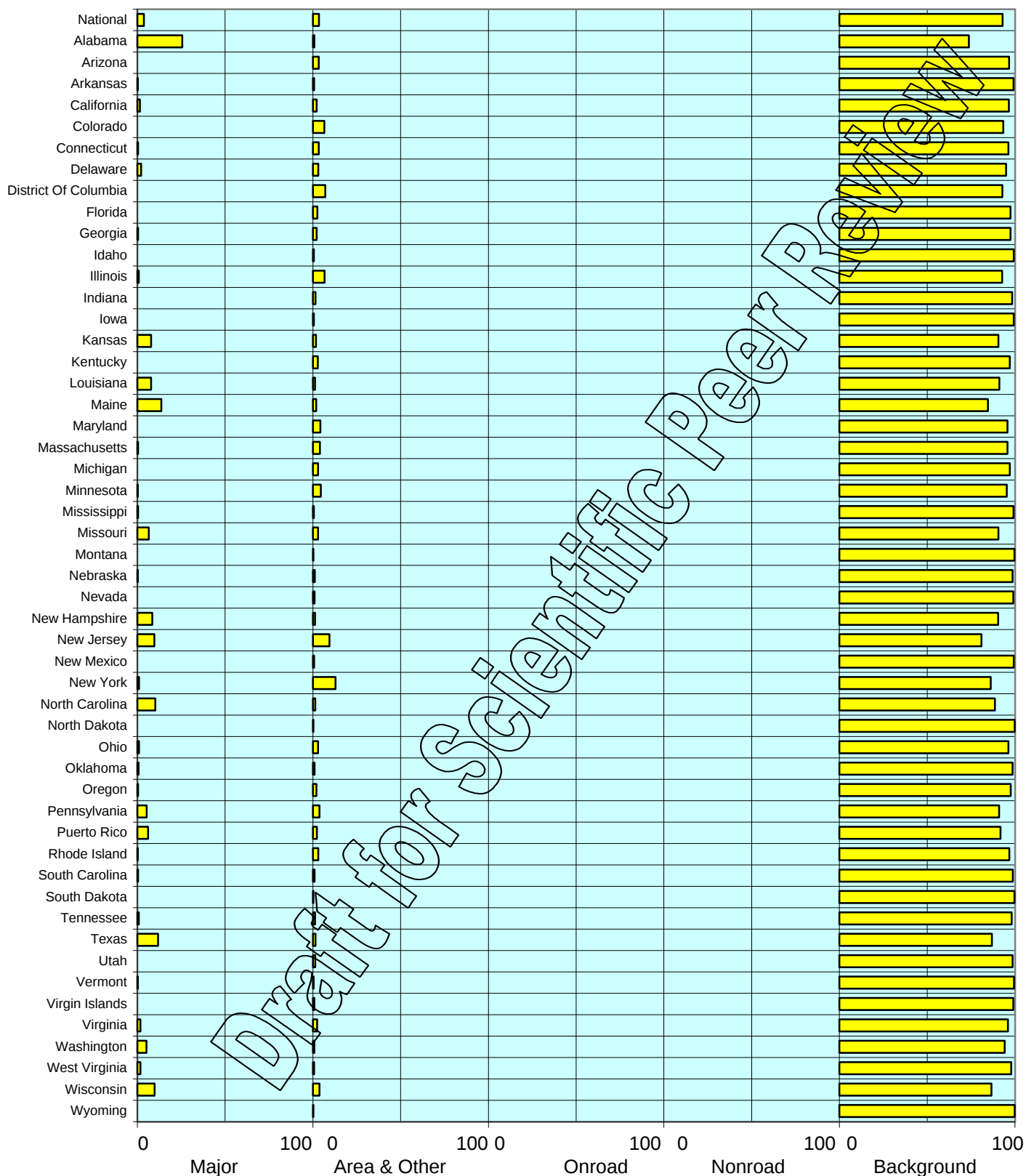
1996 Modeled Exposure Concentrations Chloroform - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

Chloroform - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

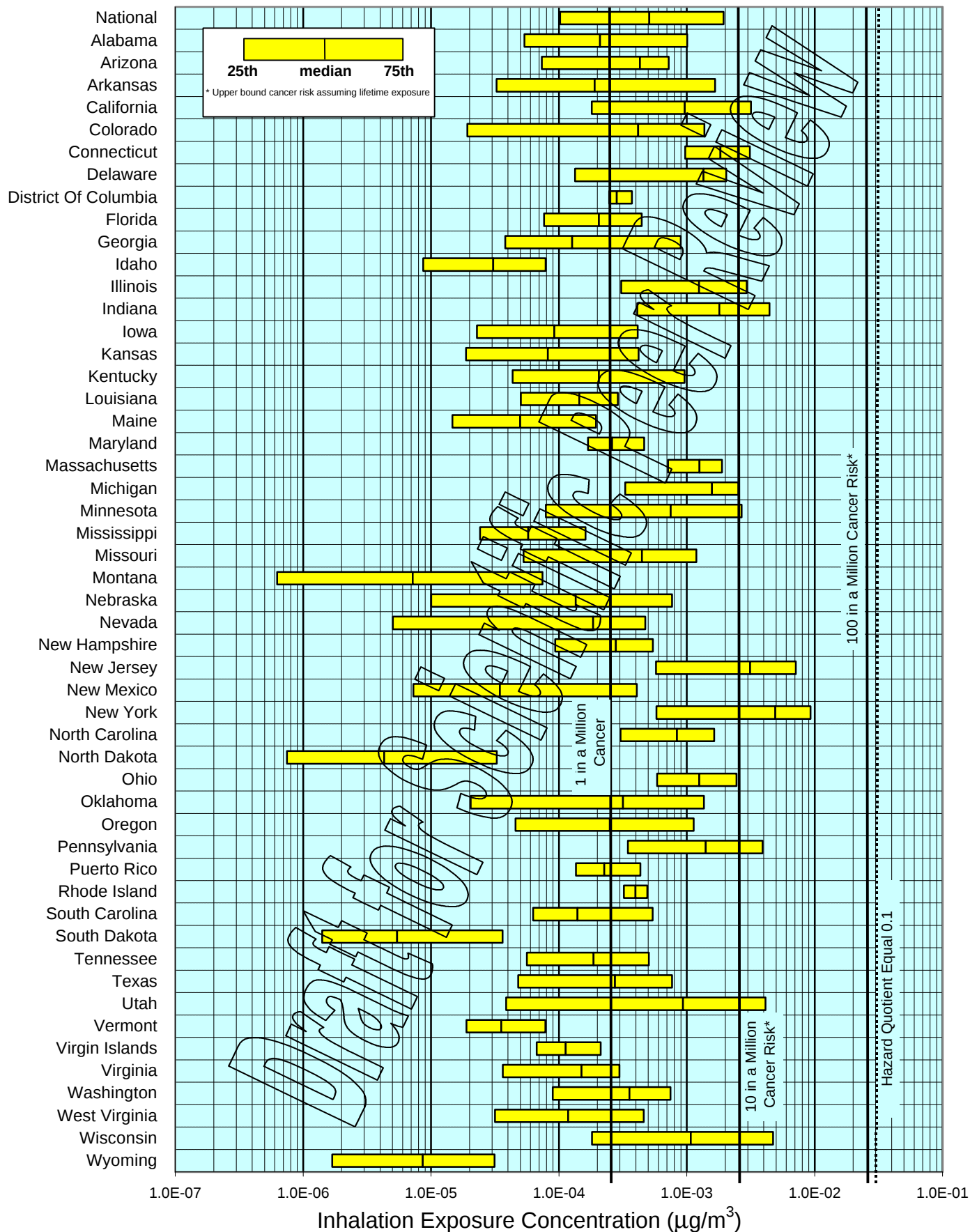


Percent Contribution to Statewide Annual Average Exposure Concentration

1996 Modeled Exposure Concentrations

Chromium - Statewide Concentration Distribution Estimates

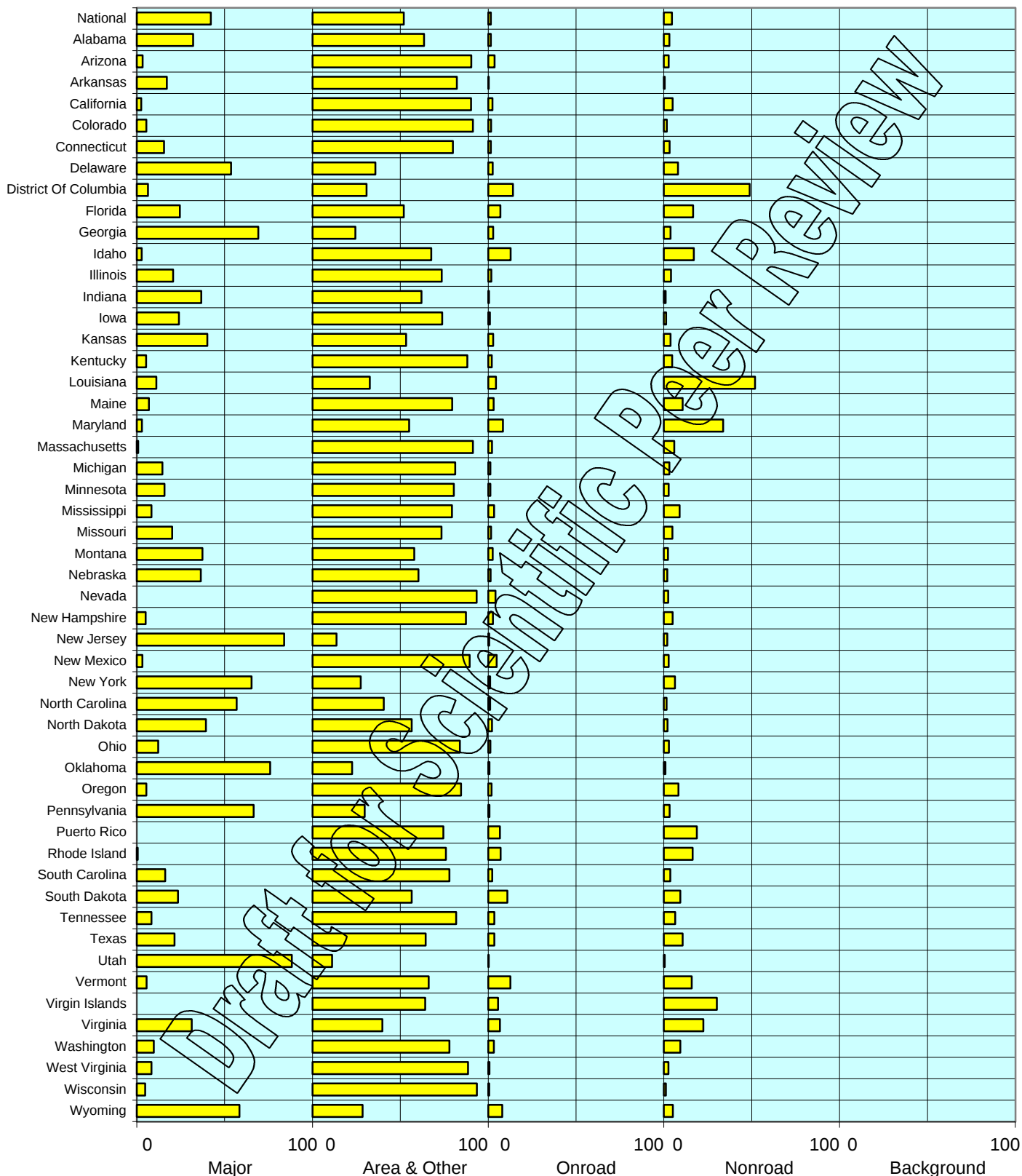
(For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

Chromium - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

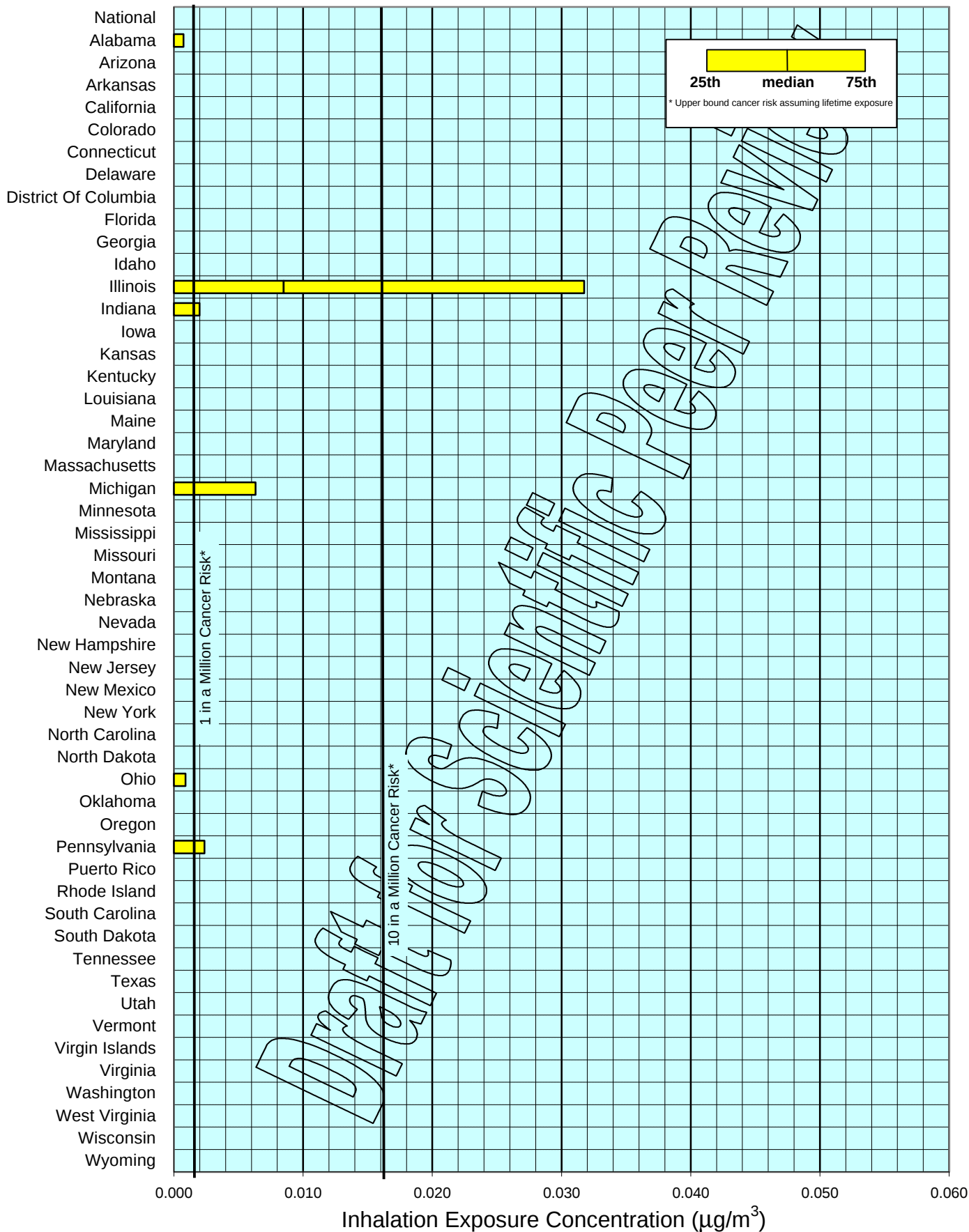


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Coke Oven Emissions - Statewide Concentration Distribution Estimates

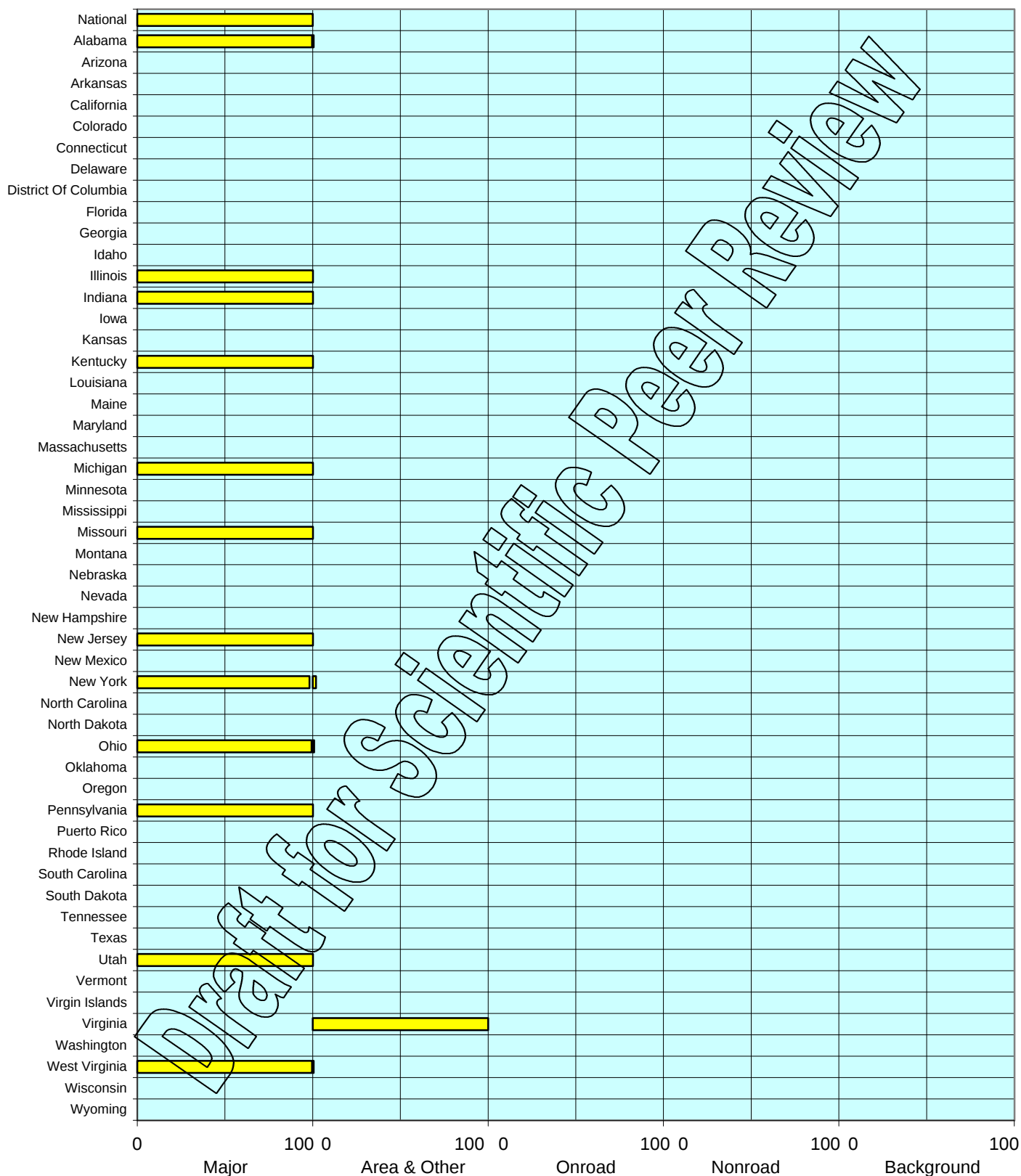
(For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

Coke Oven Emissions - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

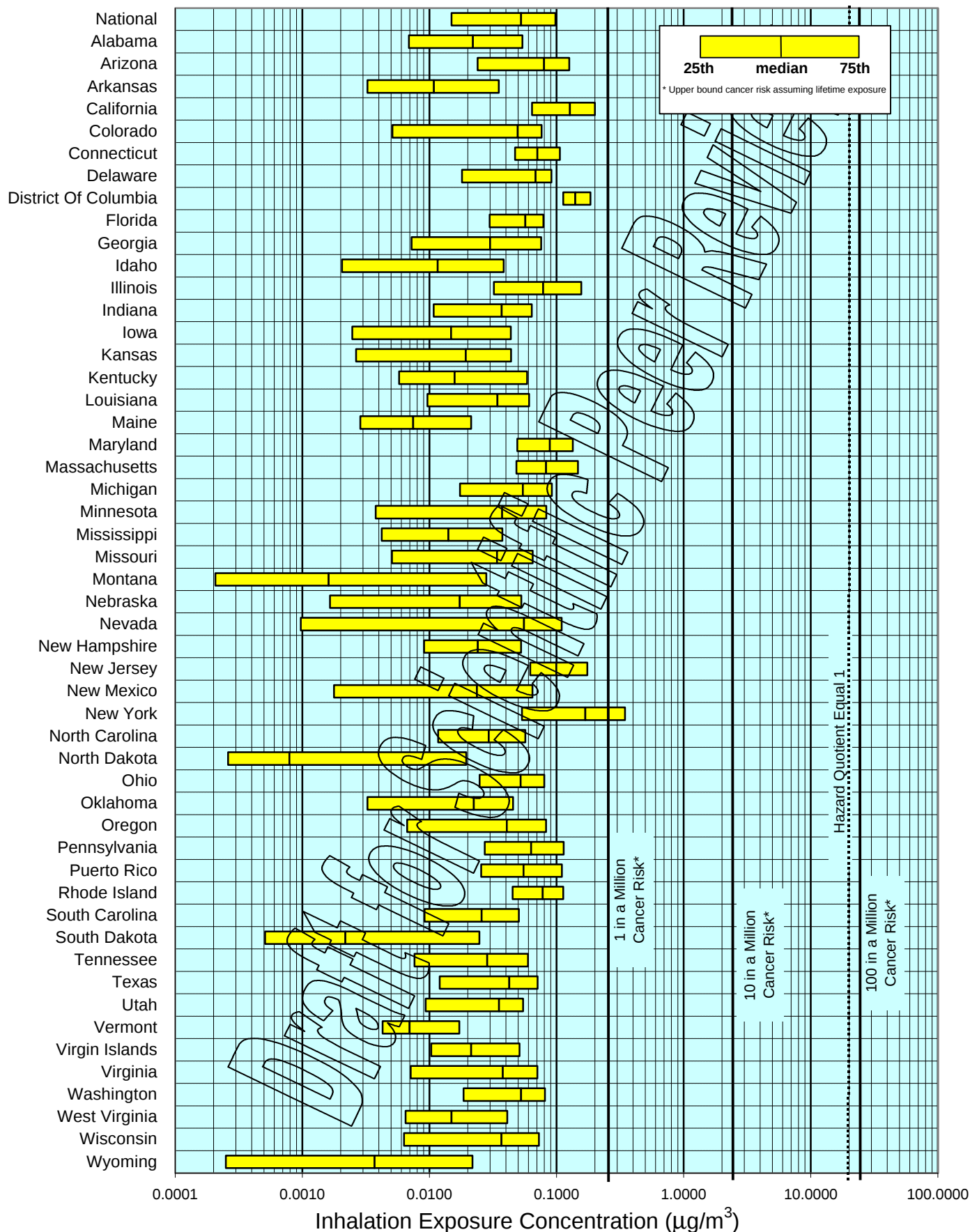


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

1,3-Dichloropropene - Statewide Concentration Distribution Estimates

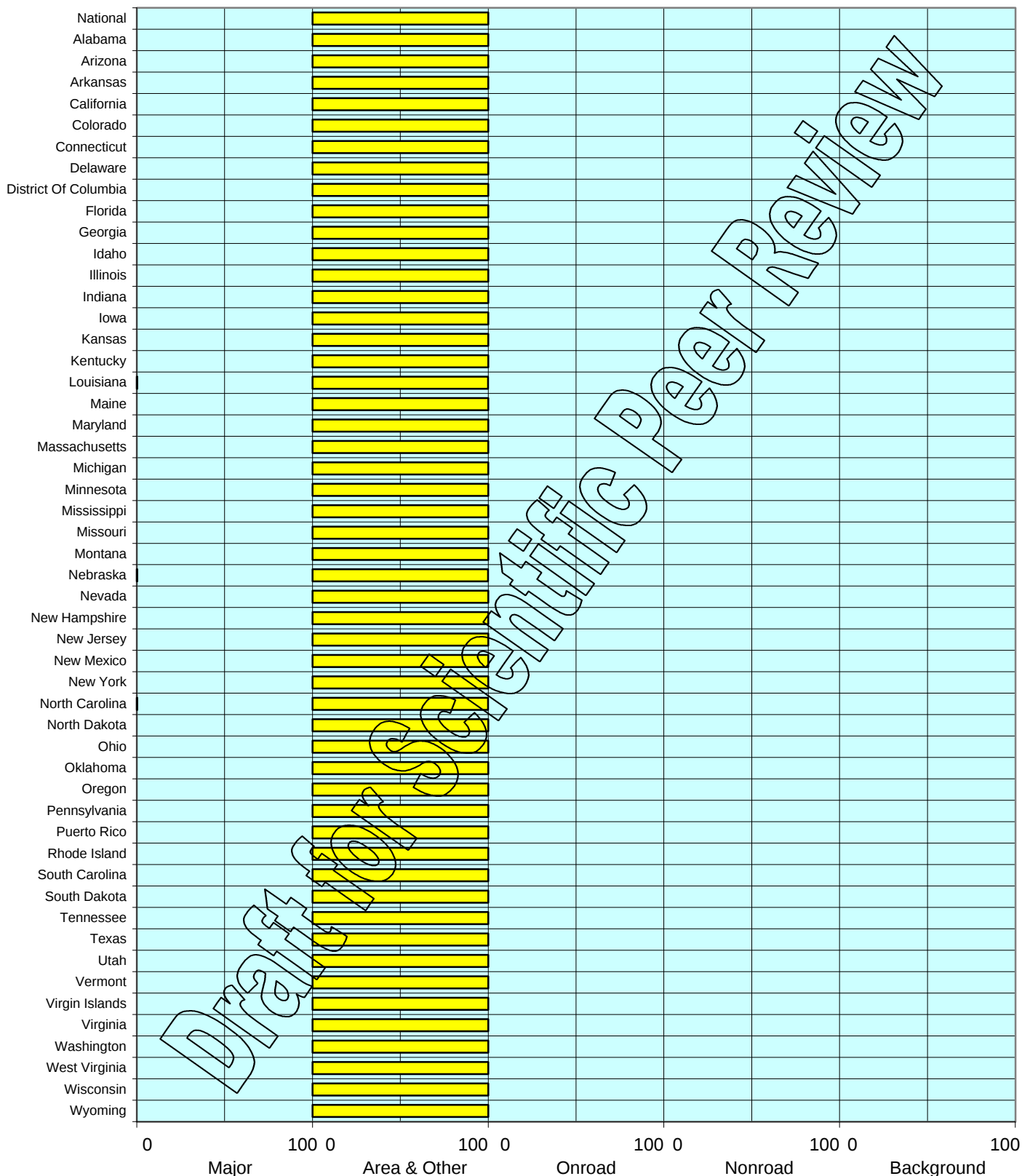
(For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

1,3-Dichloropropene - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

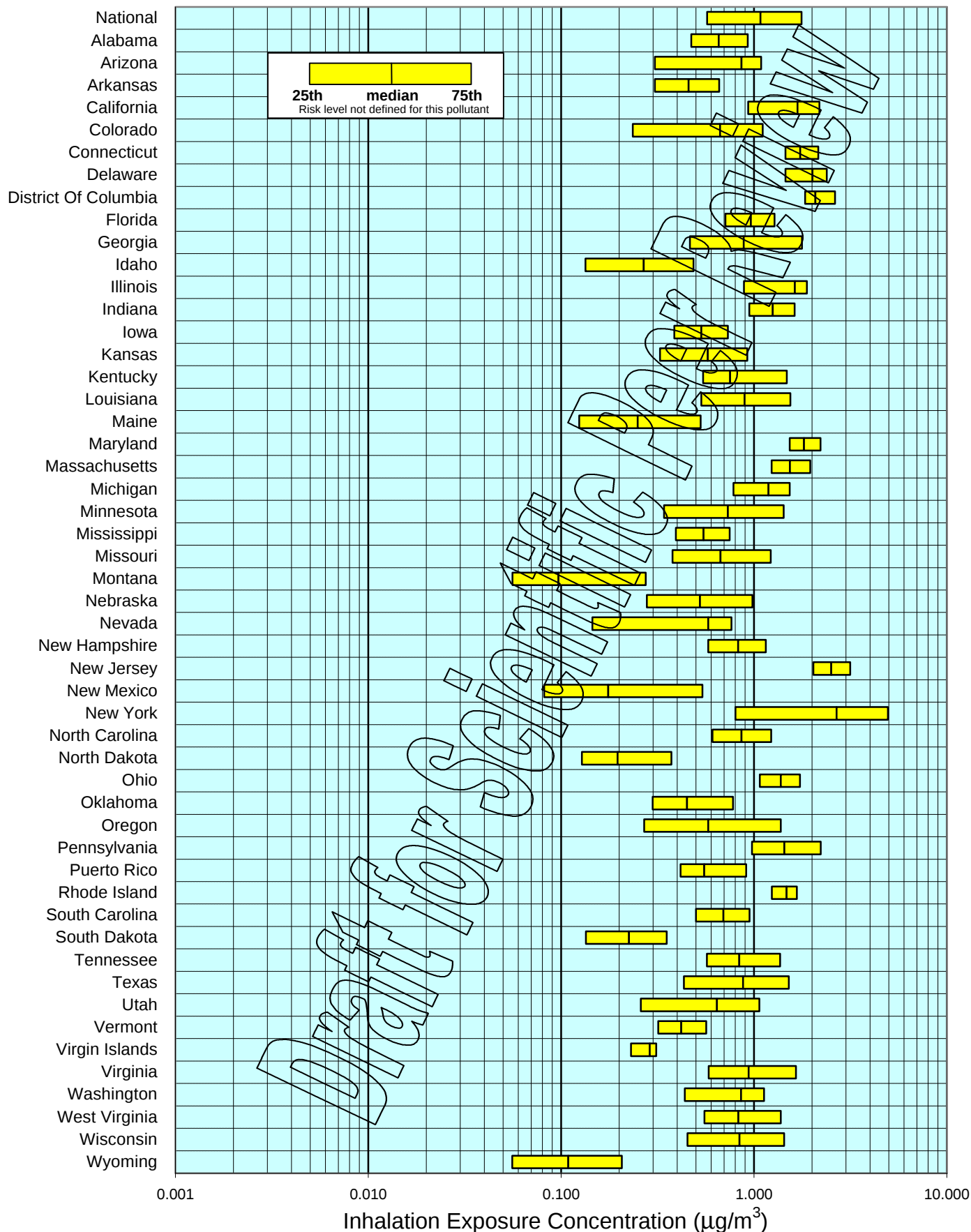


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Diesel Particulate Matter - Statewide Concentration Distribution Estimates

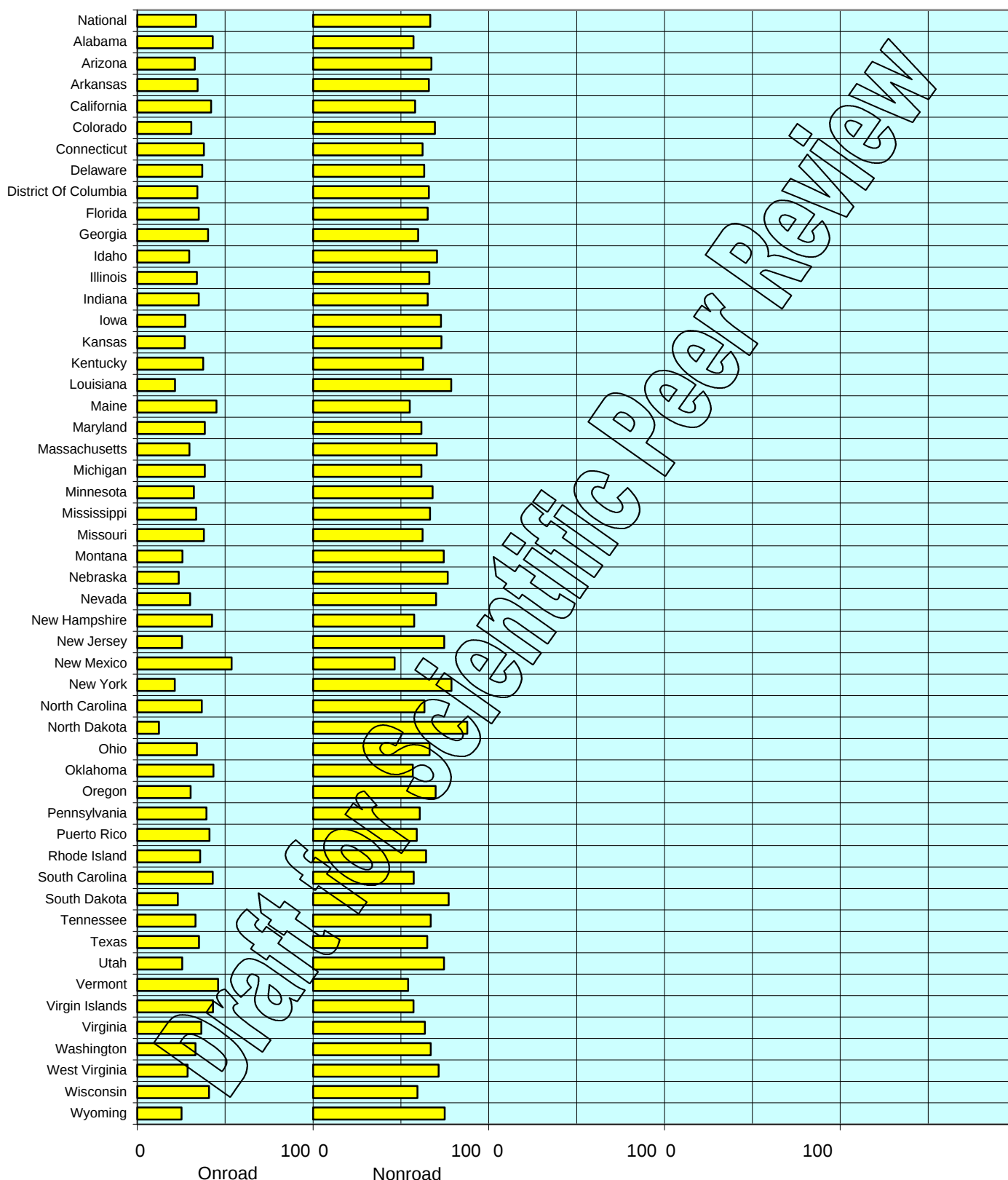
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1996 Modeled Exposure Concentrations

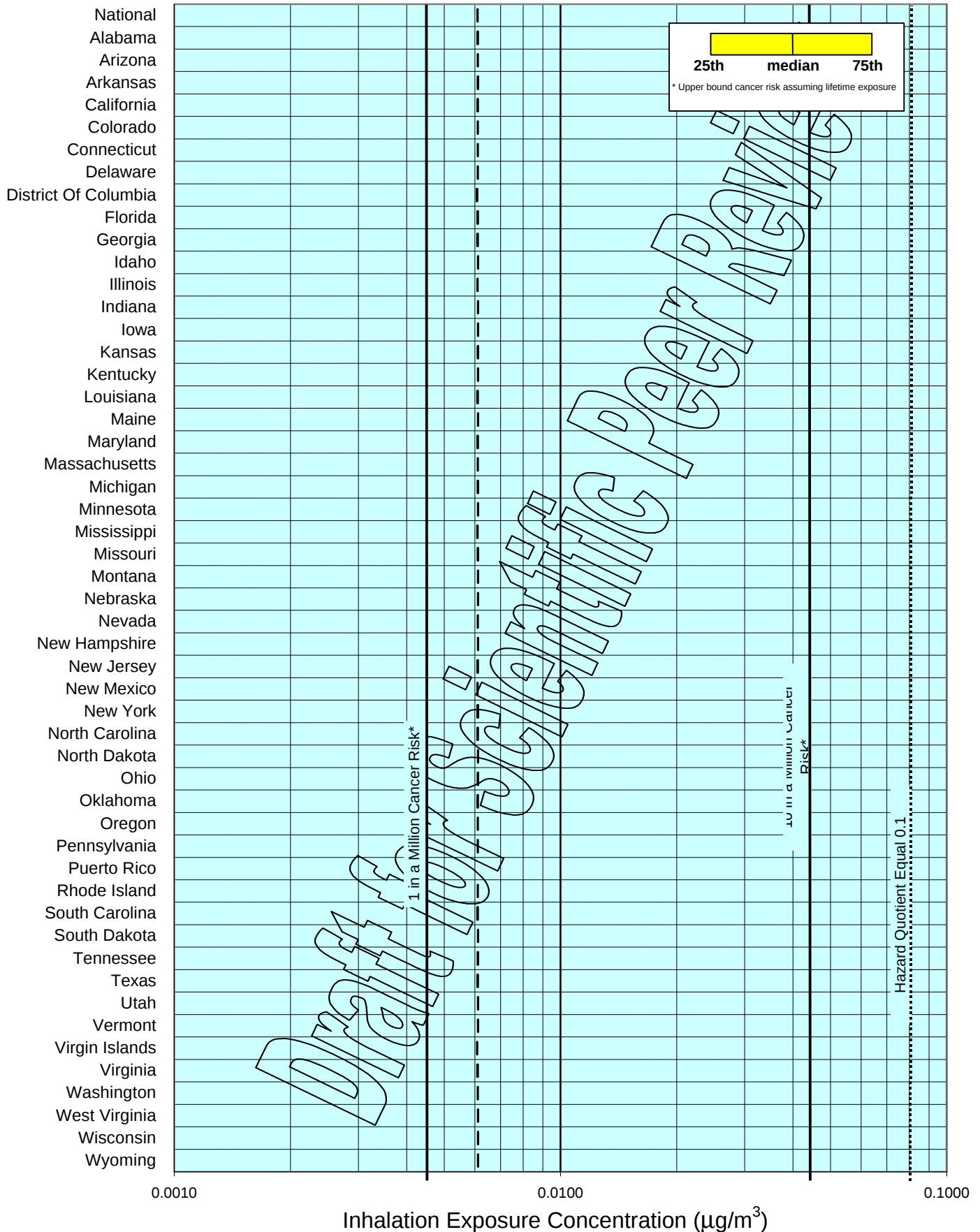
Diesel Particulate Matter - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

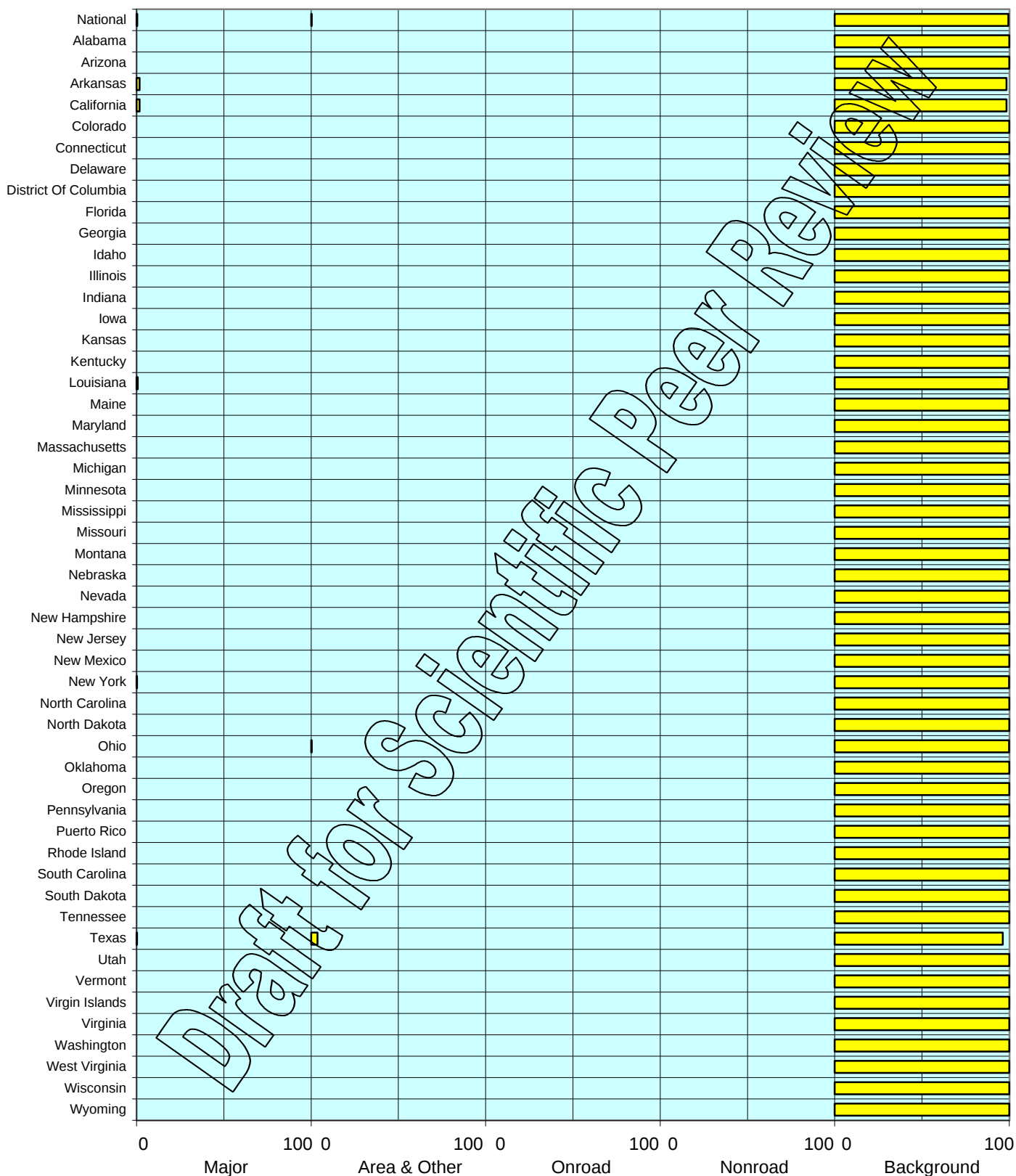


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations
Ethylene Dibromide - Statewide Concentration Distribution Estimates
(For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations
Ethylene Dibromide - Statewide Source Sector Contribution Estimates
(For Limitations On The Use of These Data See Page 2)

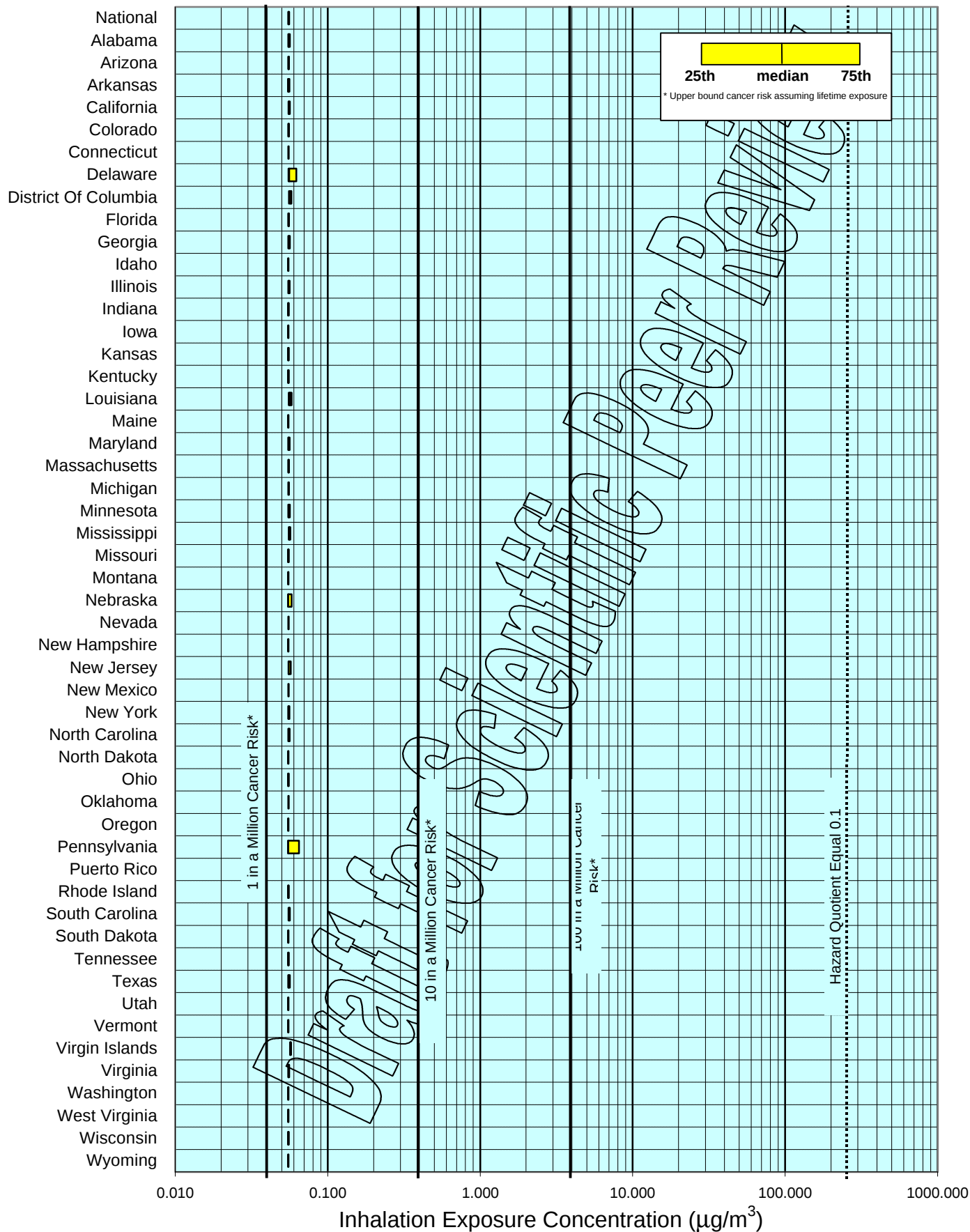


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Ethylene Dichloride - Statewide Concentration Distribution Estimates

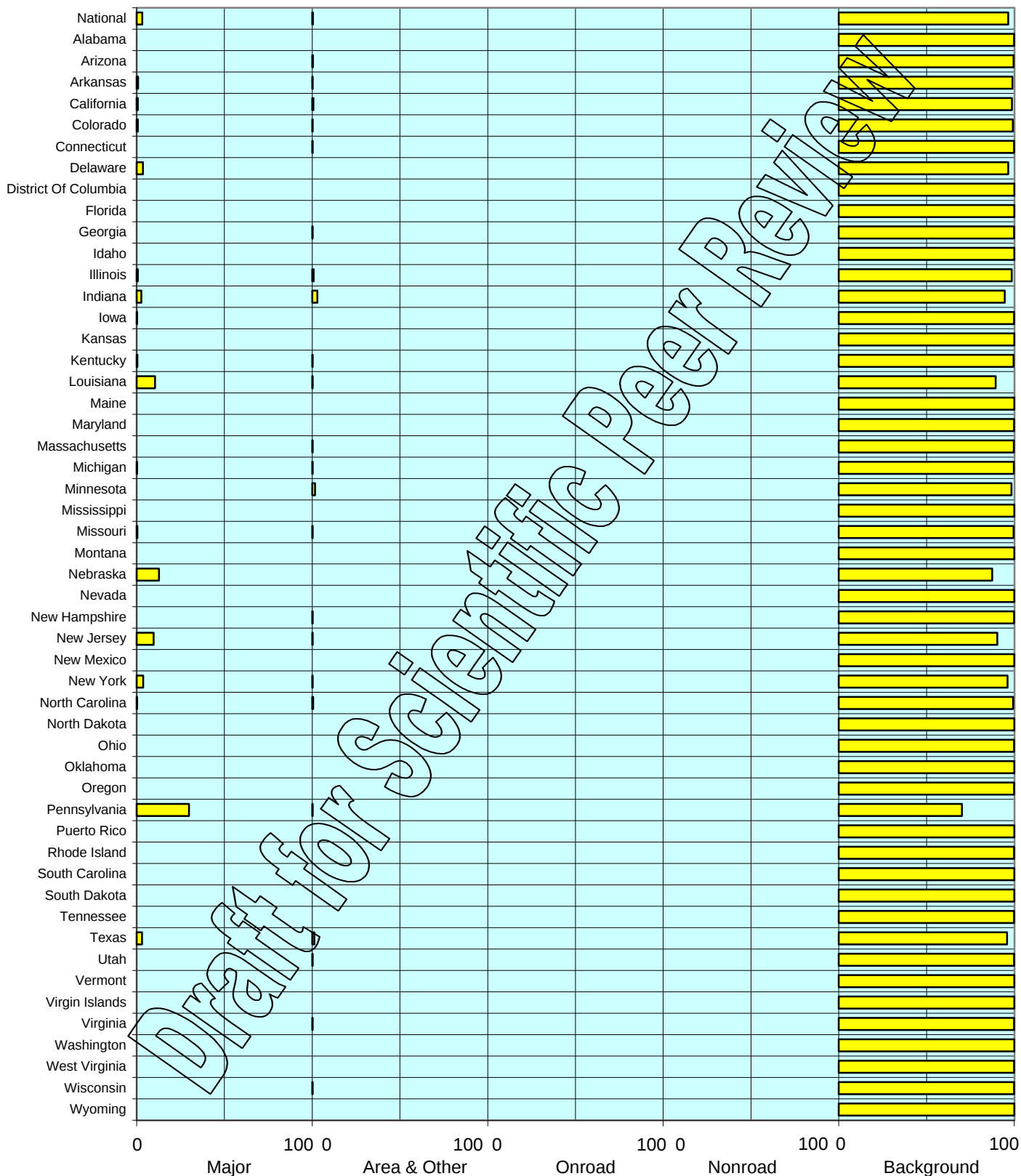
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1996 Modeled Exposure Concentrations

Ethylene Dichloride - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

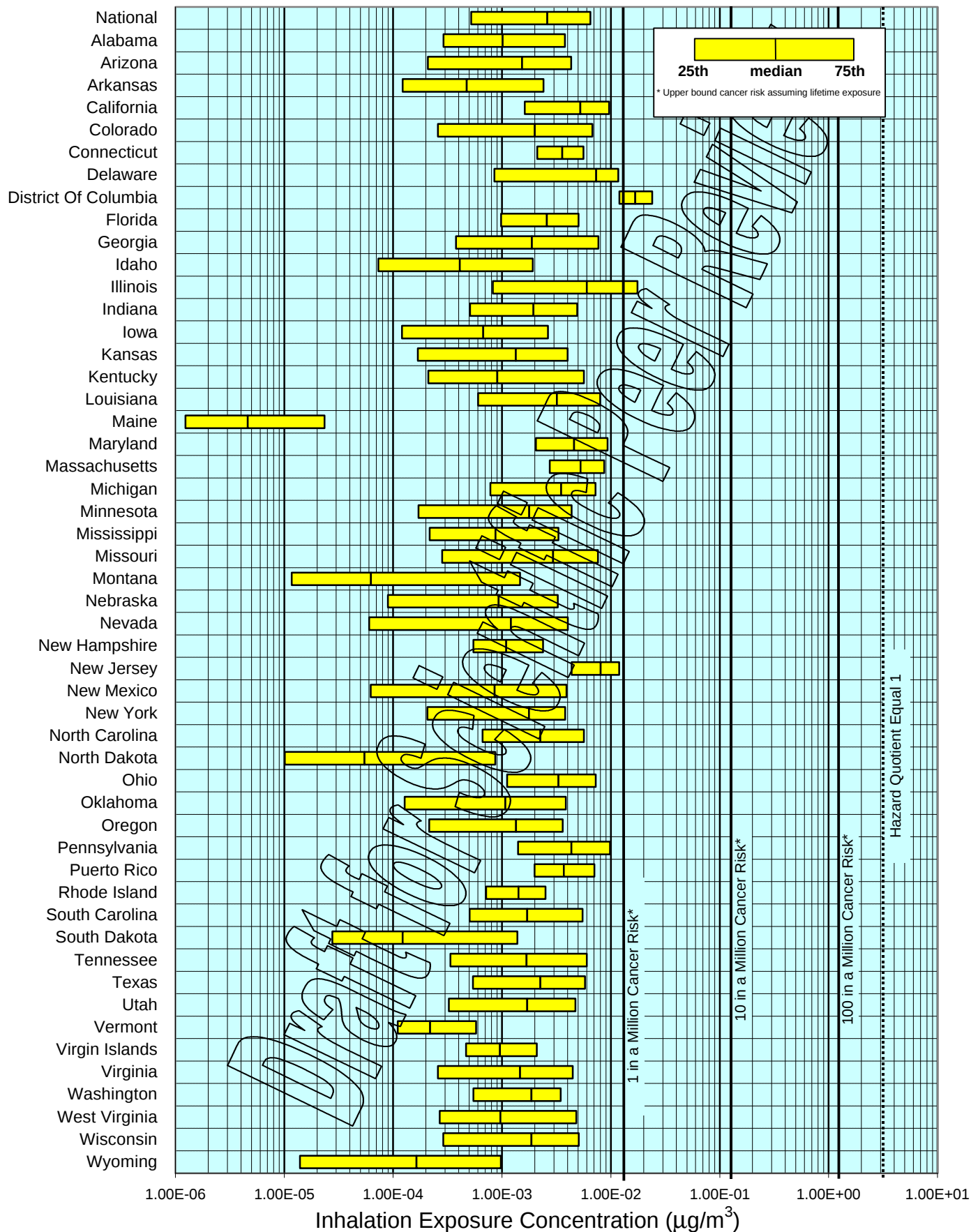


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Ethylene Oxide - Statewide Concentration Distribution Estimates

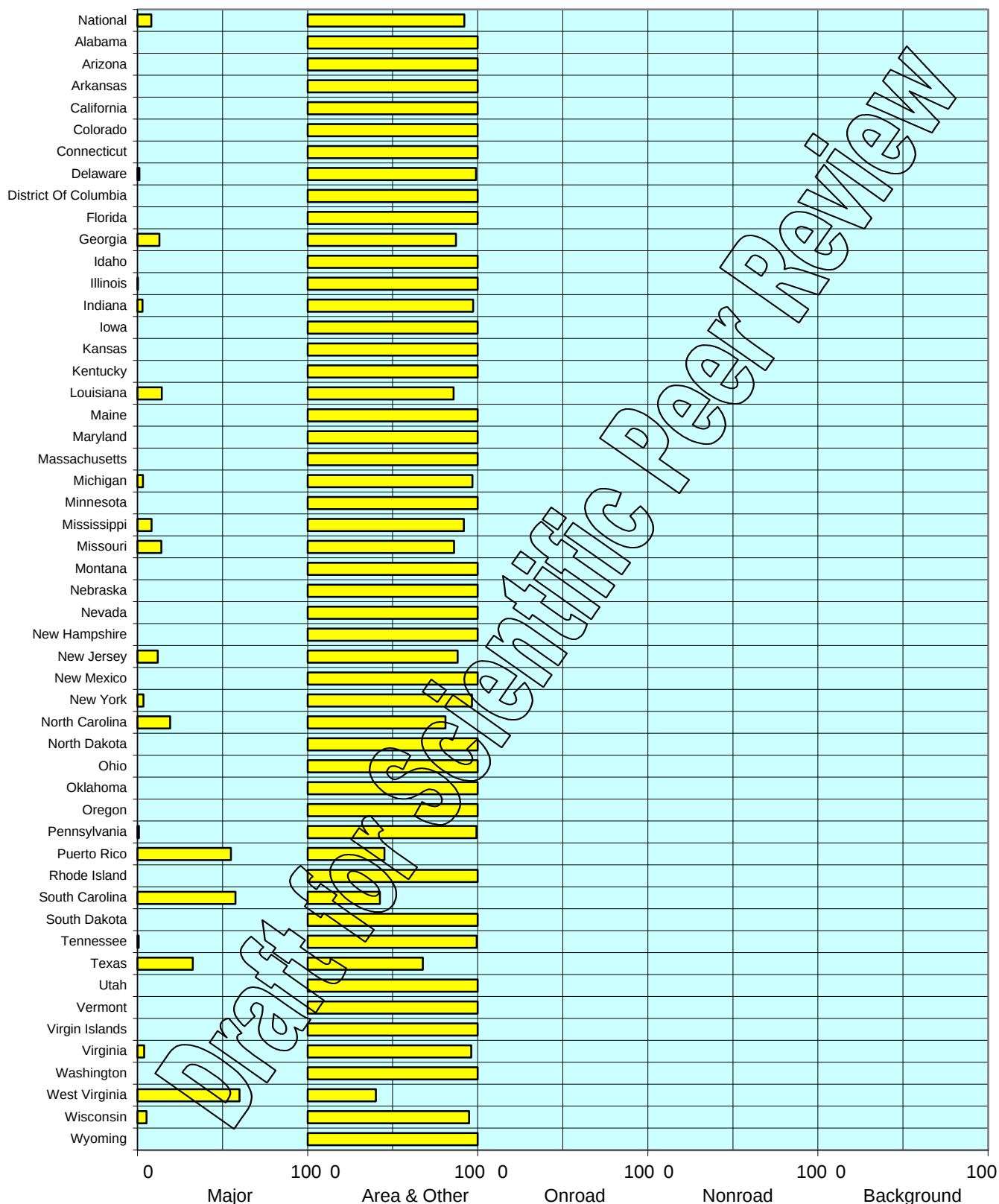
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1996 Modeled Exposure Concentrations

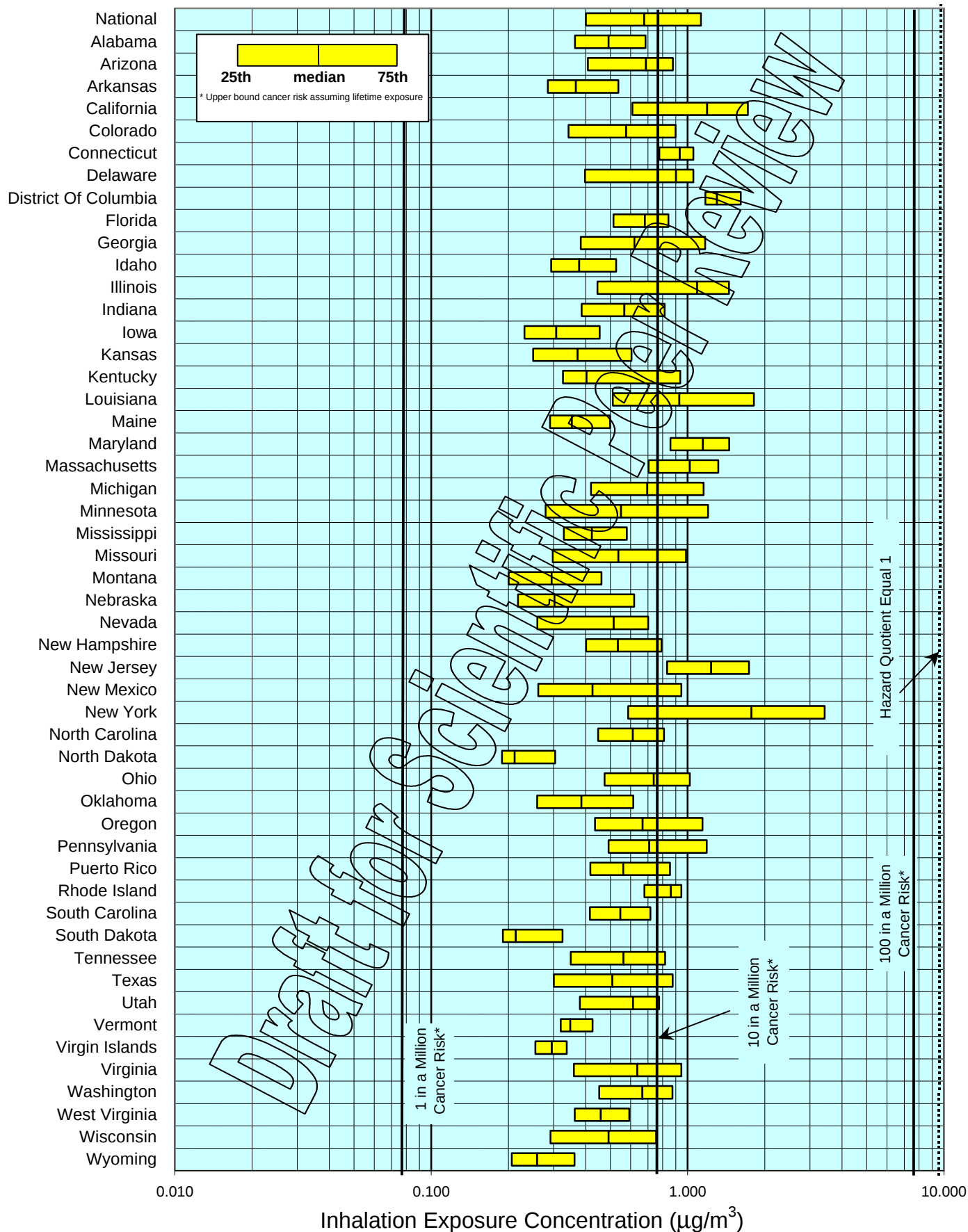
Ethylene Oxide - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

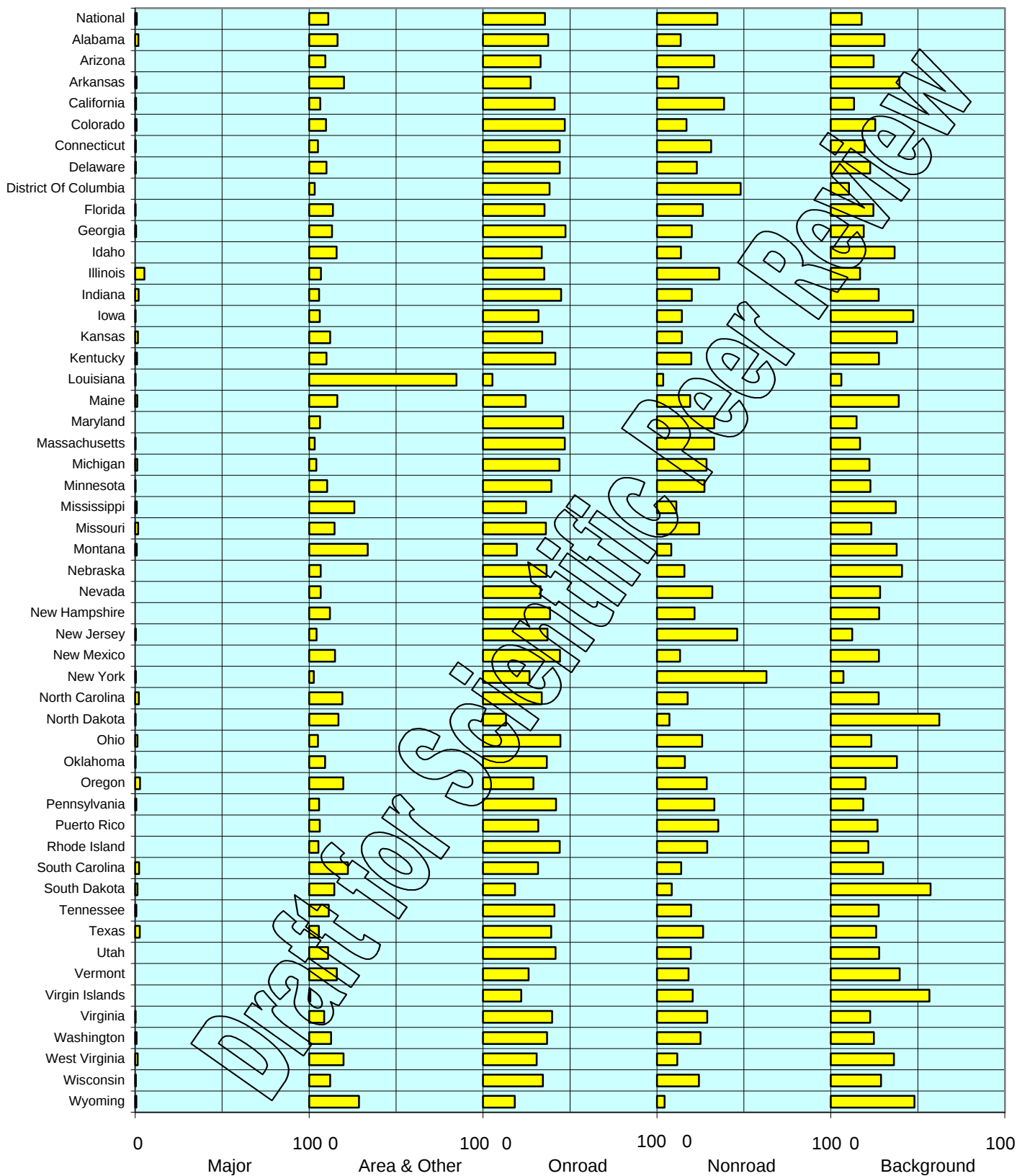
1996 Modeled Exposure Concentrations
Formaldehyde - Statewide Concentration Distribution Estimates
(For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

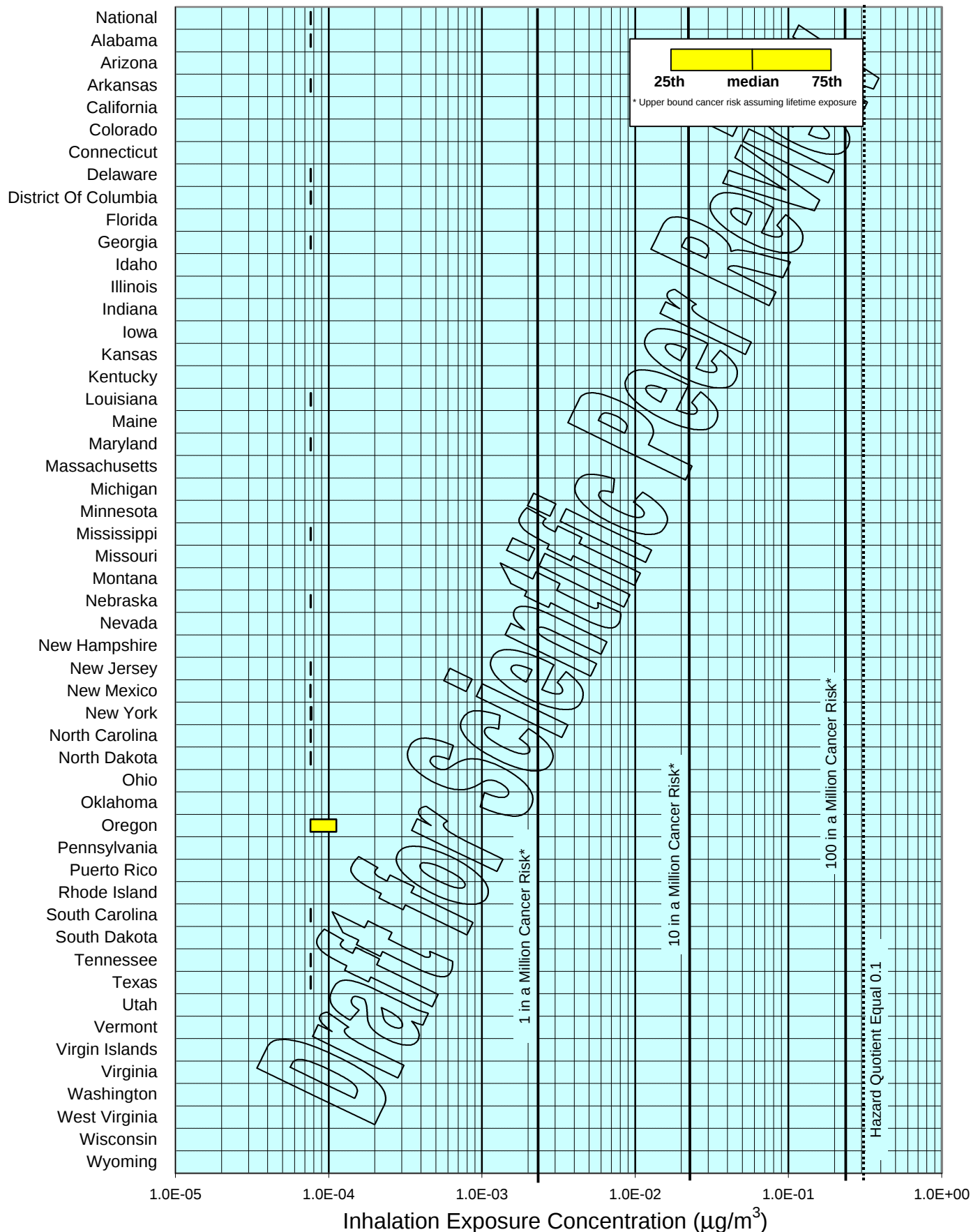
Formaldehyde - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

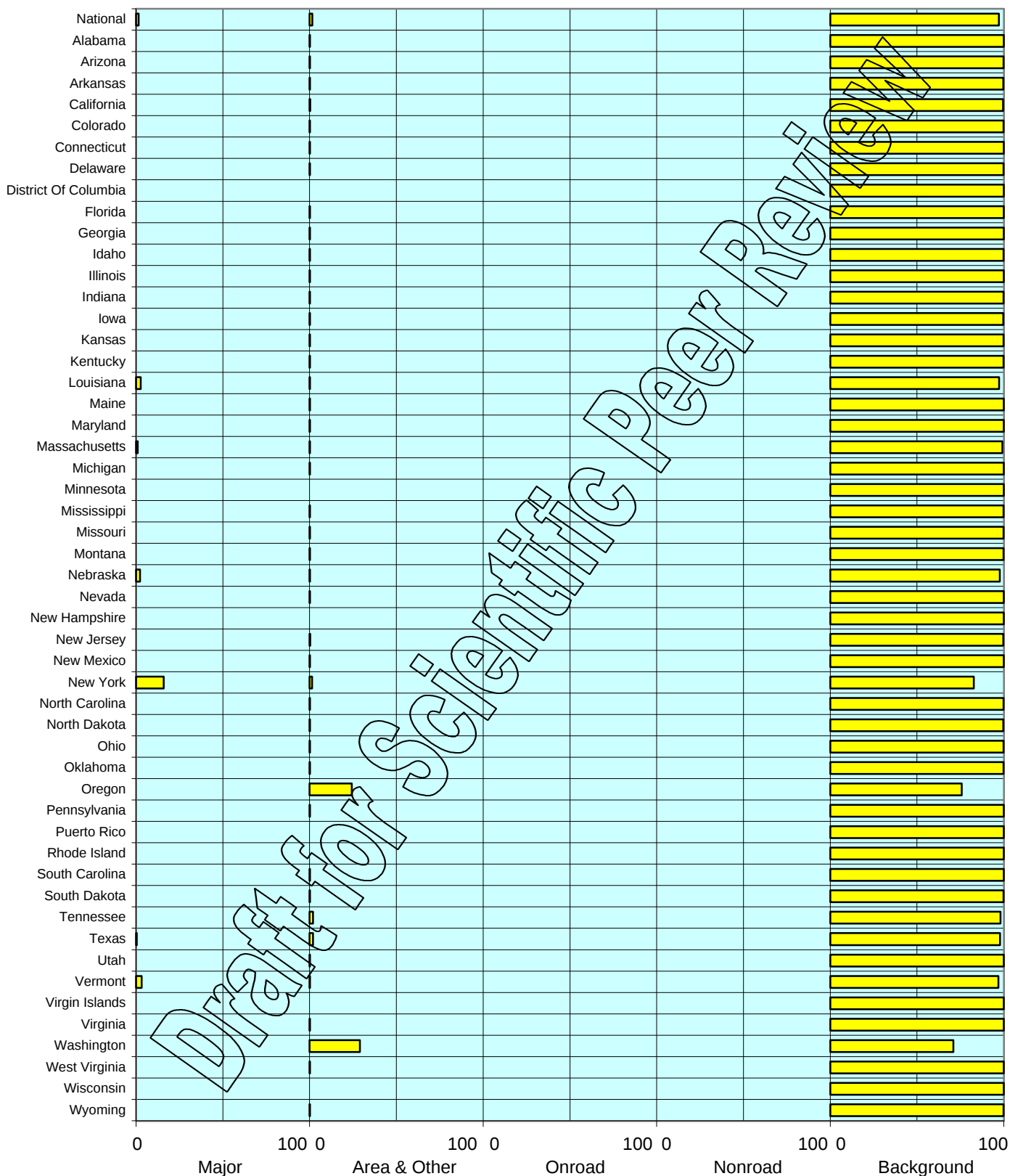
1996 Modeled Exposure Concentrations Hexachlorobenzene - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

Hexachlorobenzene - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

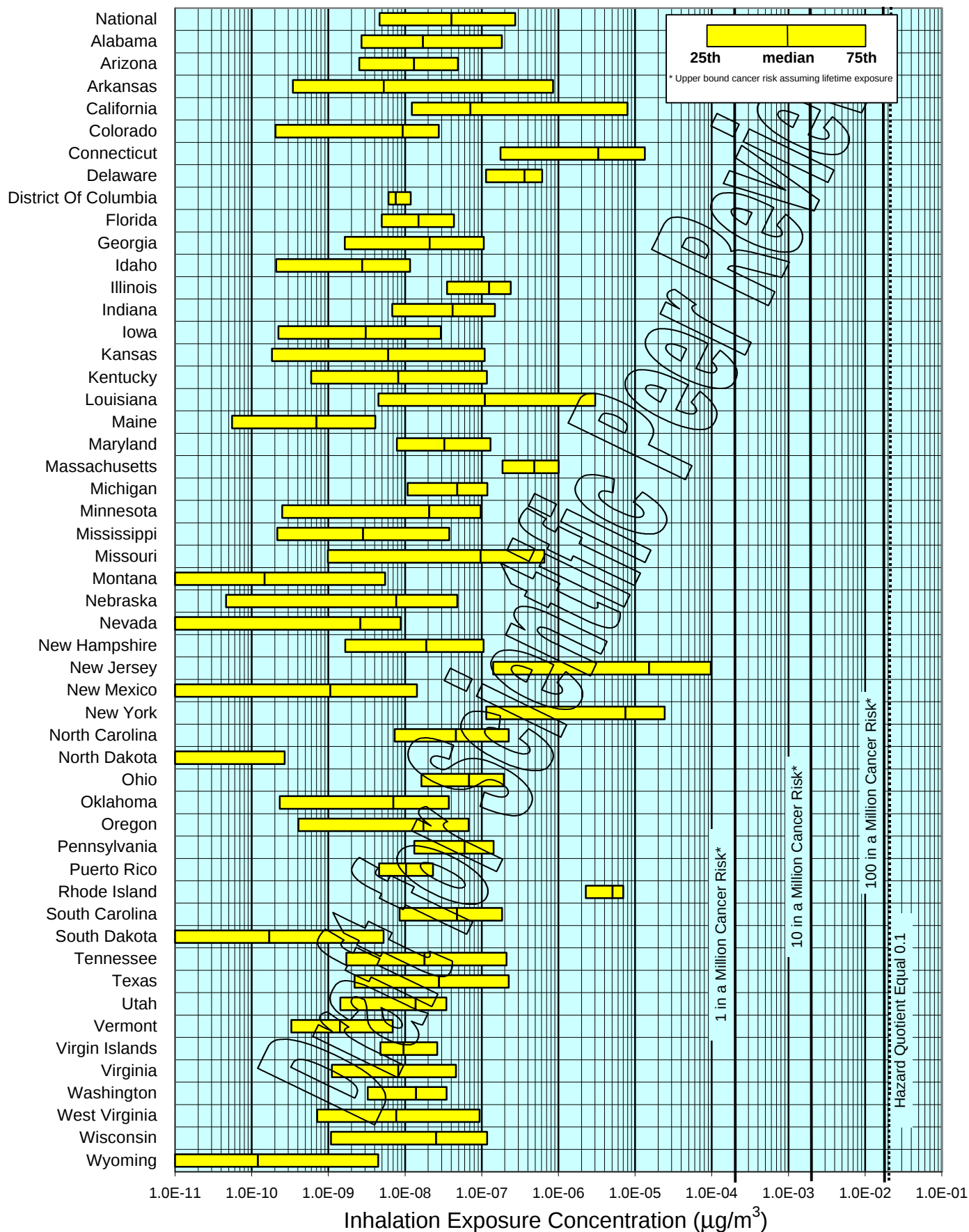


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Hydrazine - Statewide Concentration Distribution Estimates

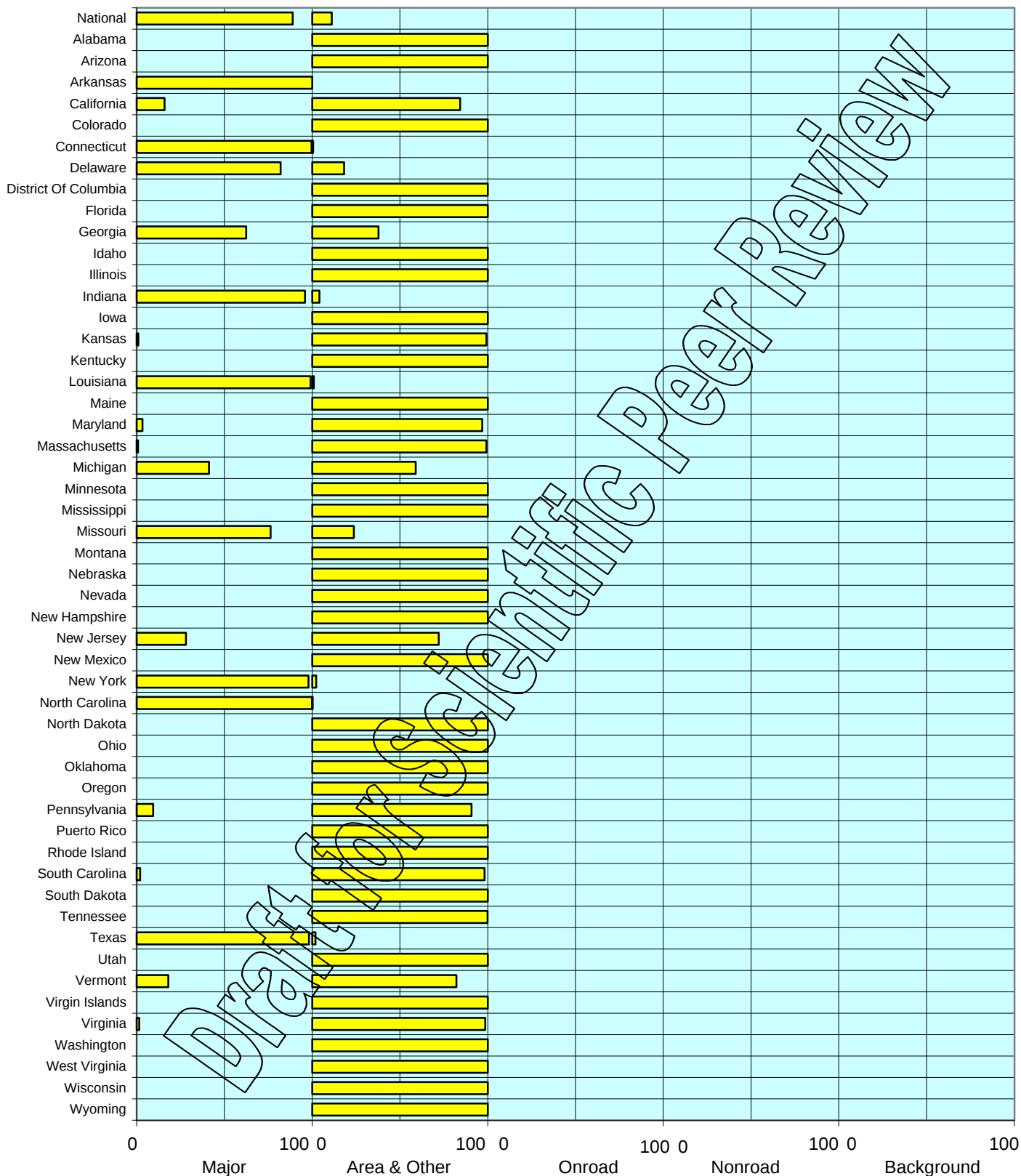
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1996 Modeled Exposure Concentrations

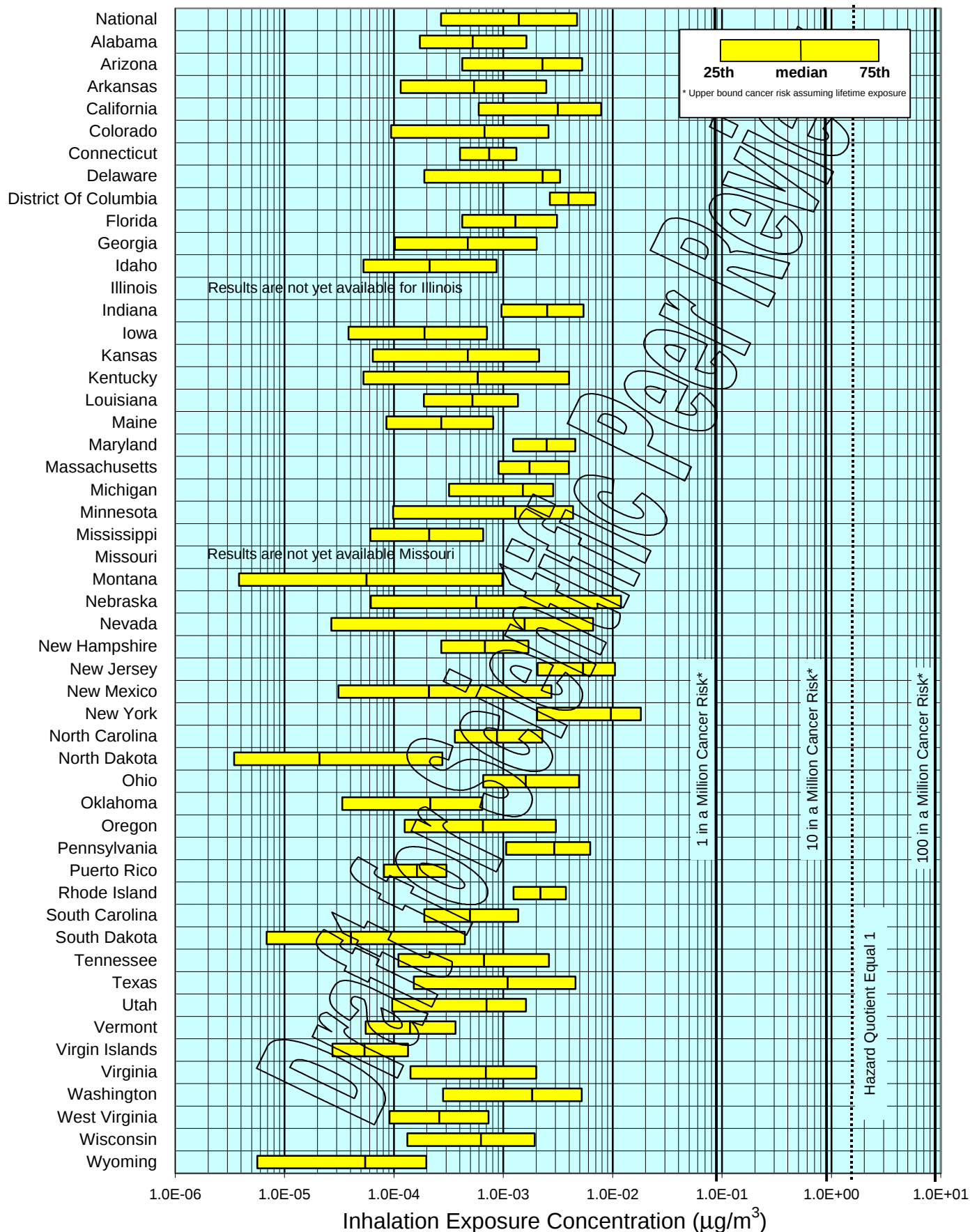
Hydrazine - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

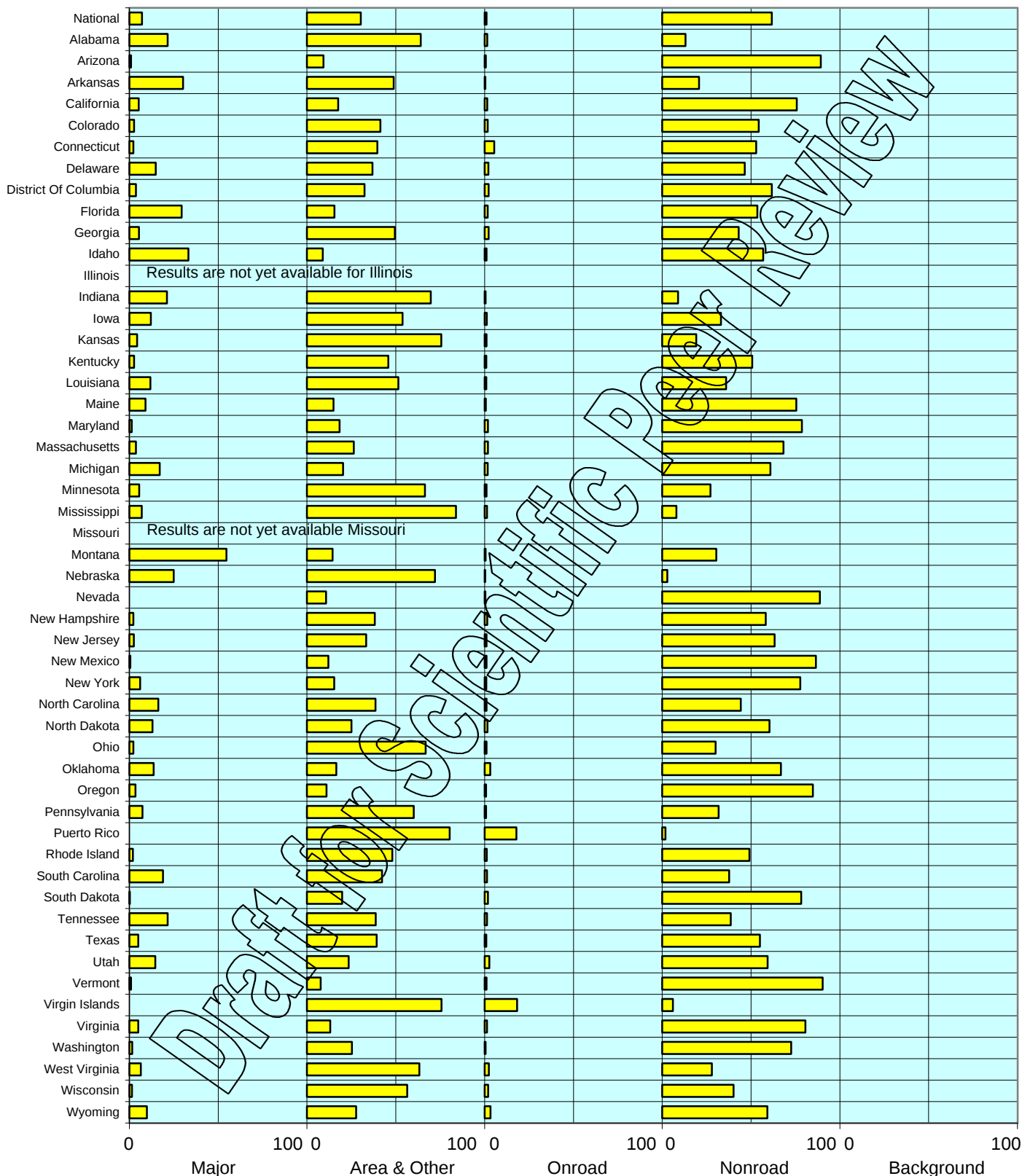
1996 Modeled Exposure Concentrations Lead - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



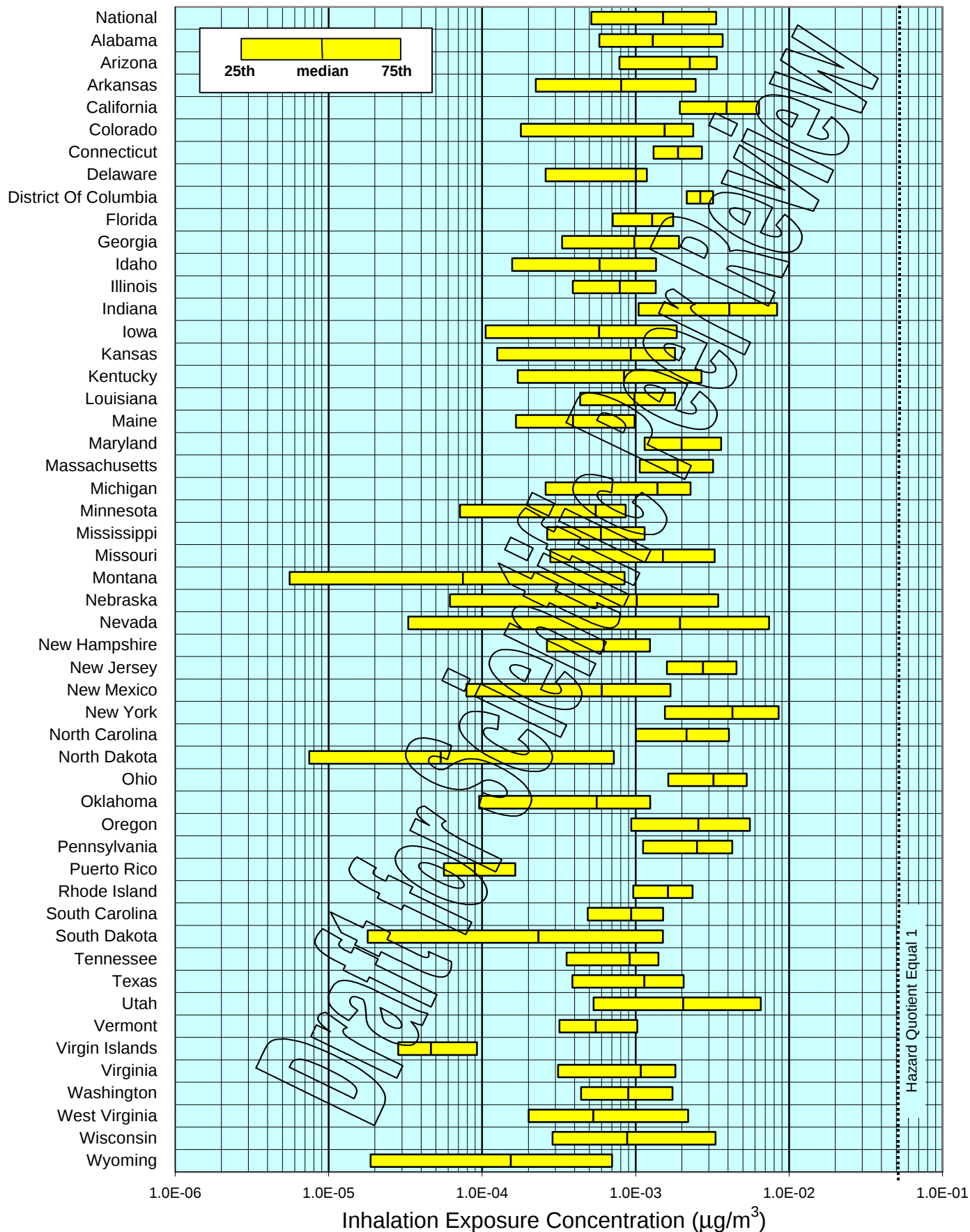
1996 Modeled Exposure Concentrations

Lead - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



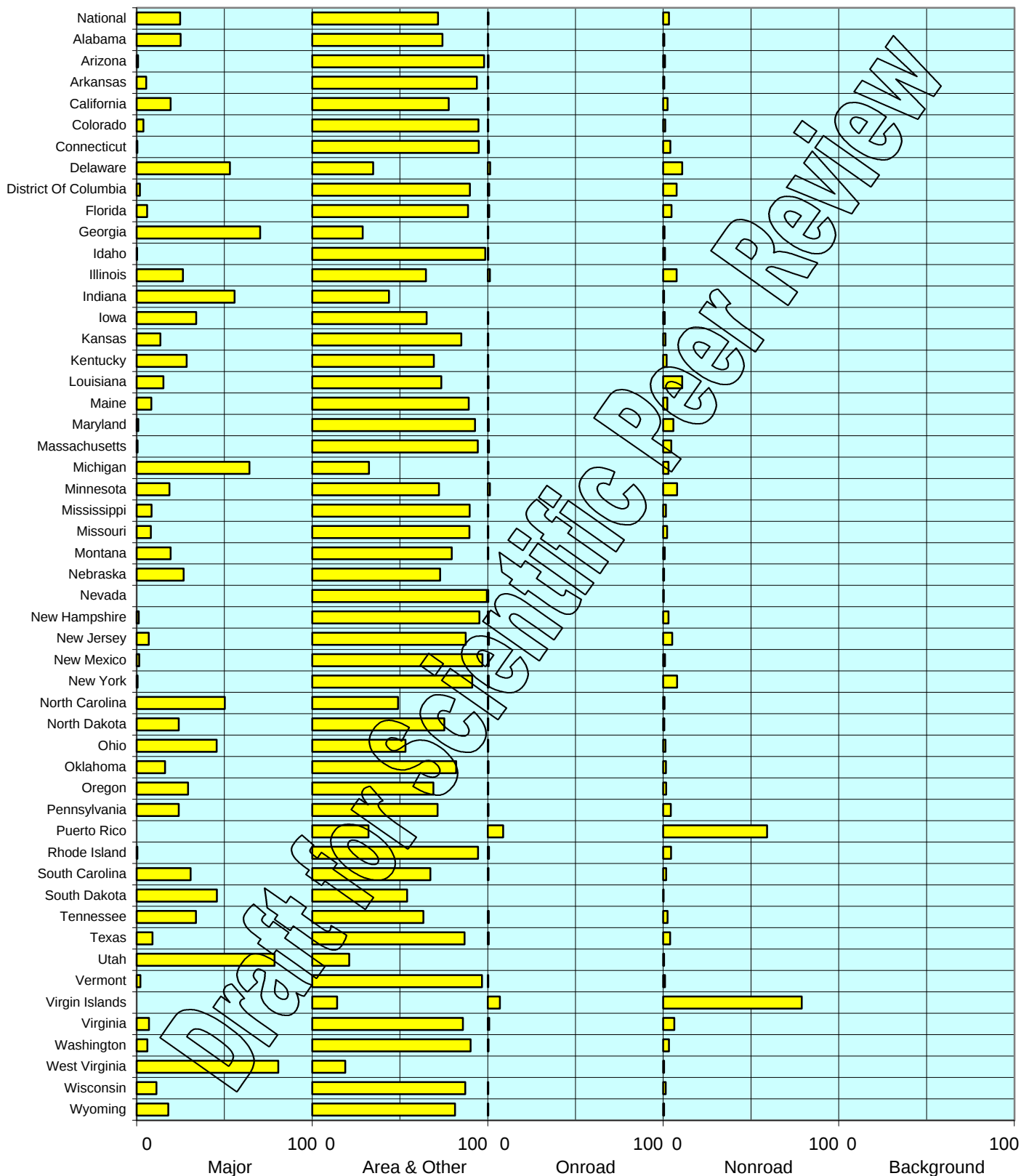
1996 Modeled Exposure Concentrations Manganese - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

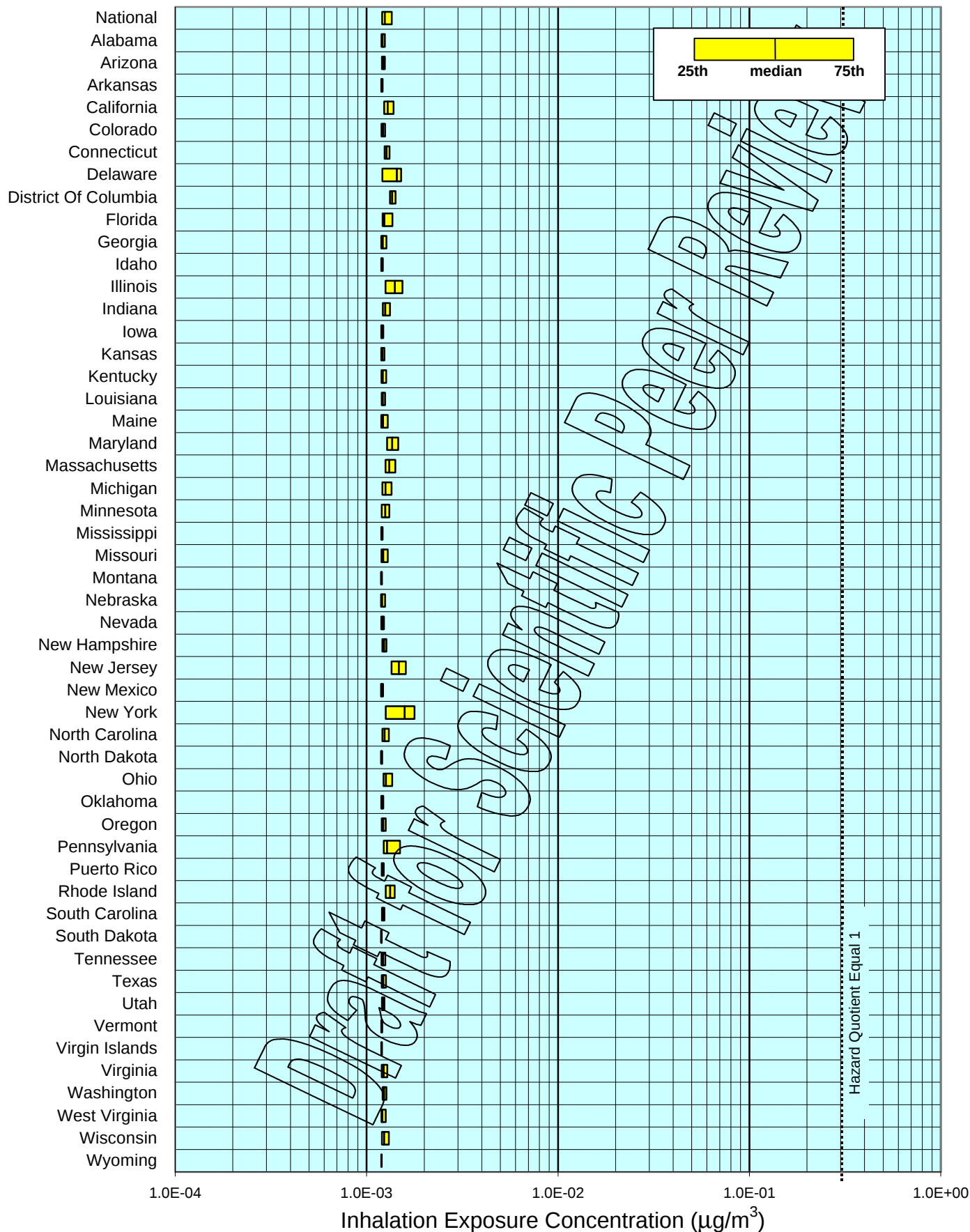
Manganese - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

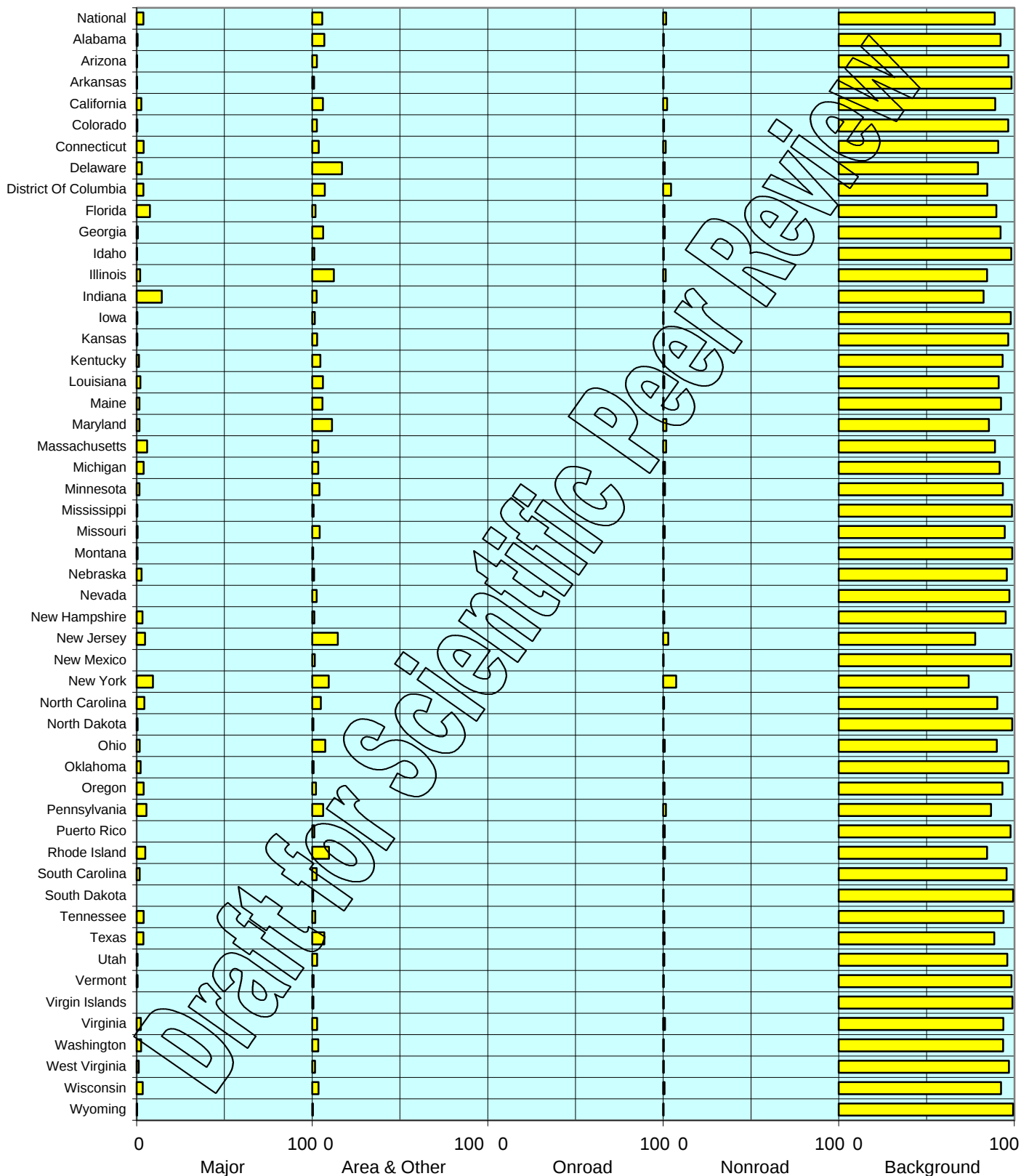
1996 Modeled Exposure Concentrations Mercury - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

Mercury - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

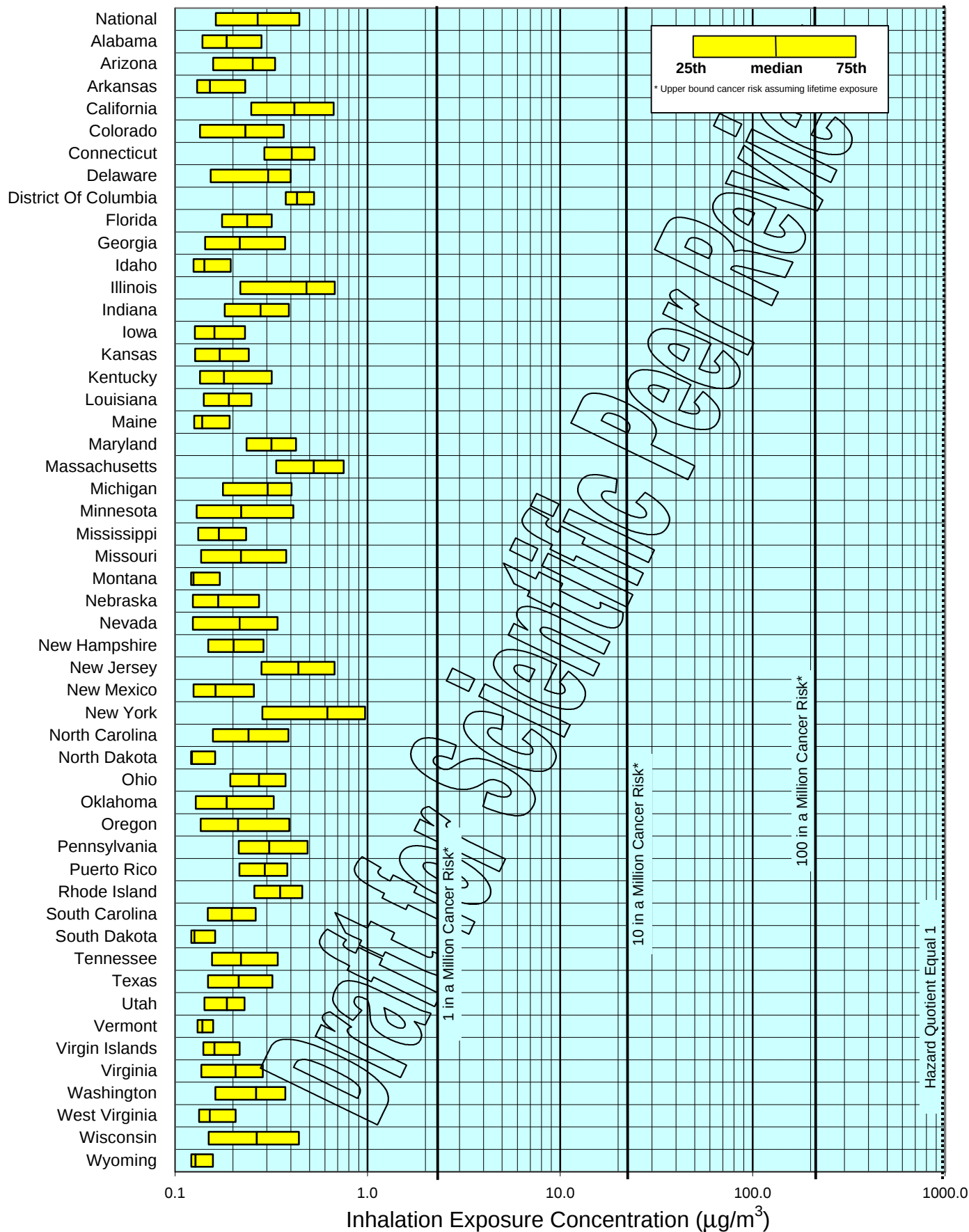


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Methylene Chloride - Statewide Concentration Distribution Estimates

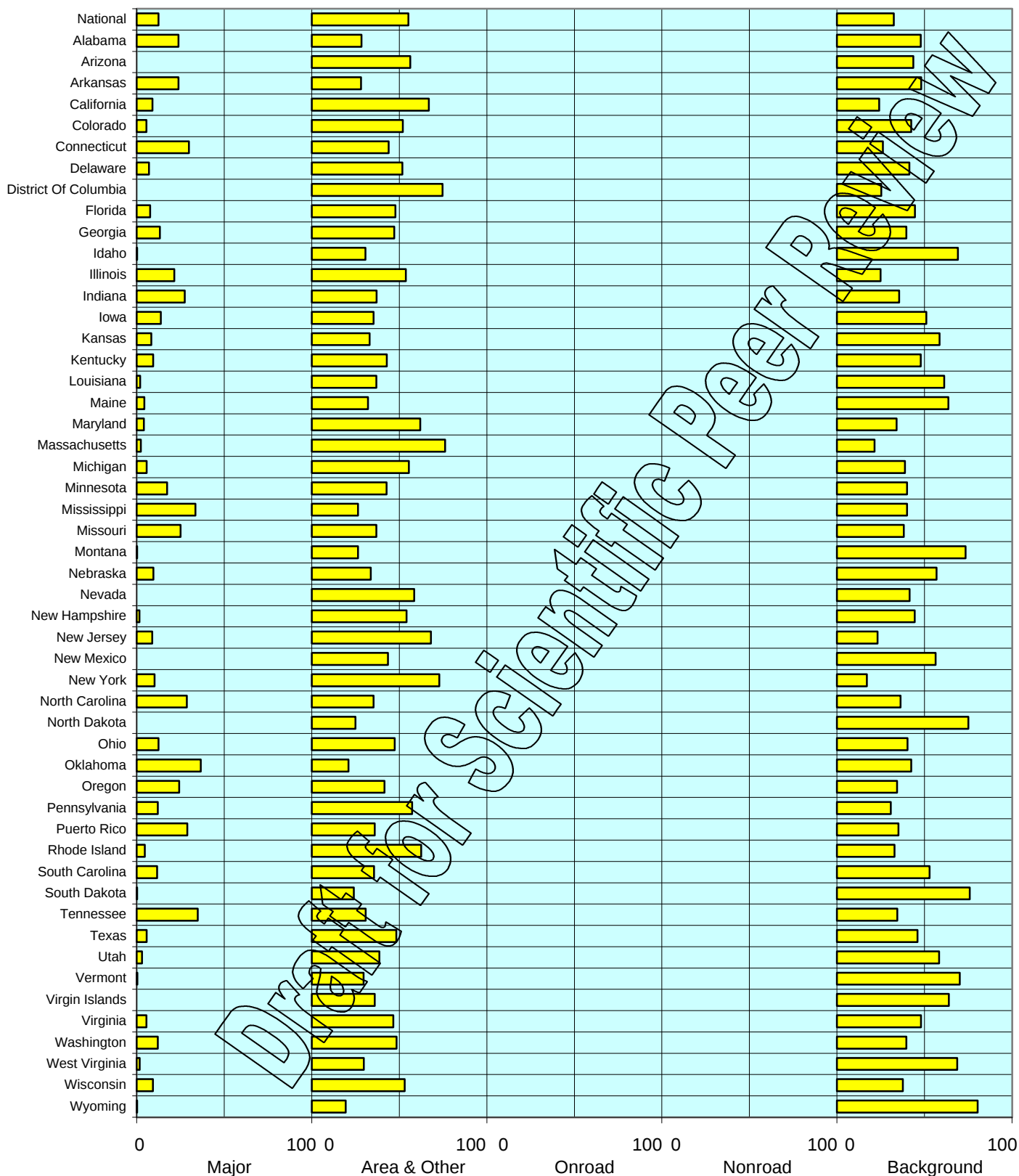
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1996 Modeled Exposure Concentrations

Methylene Chloride - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

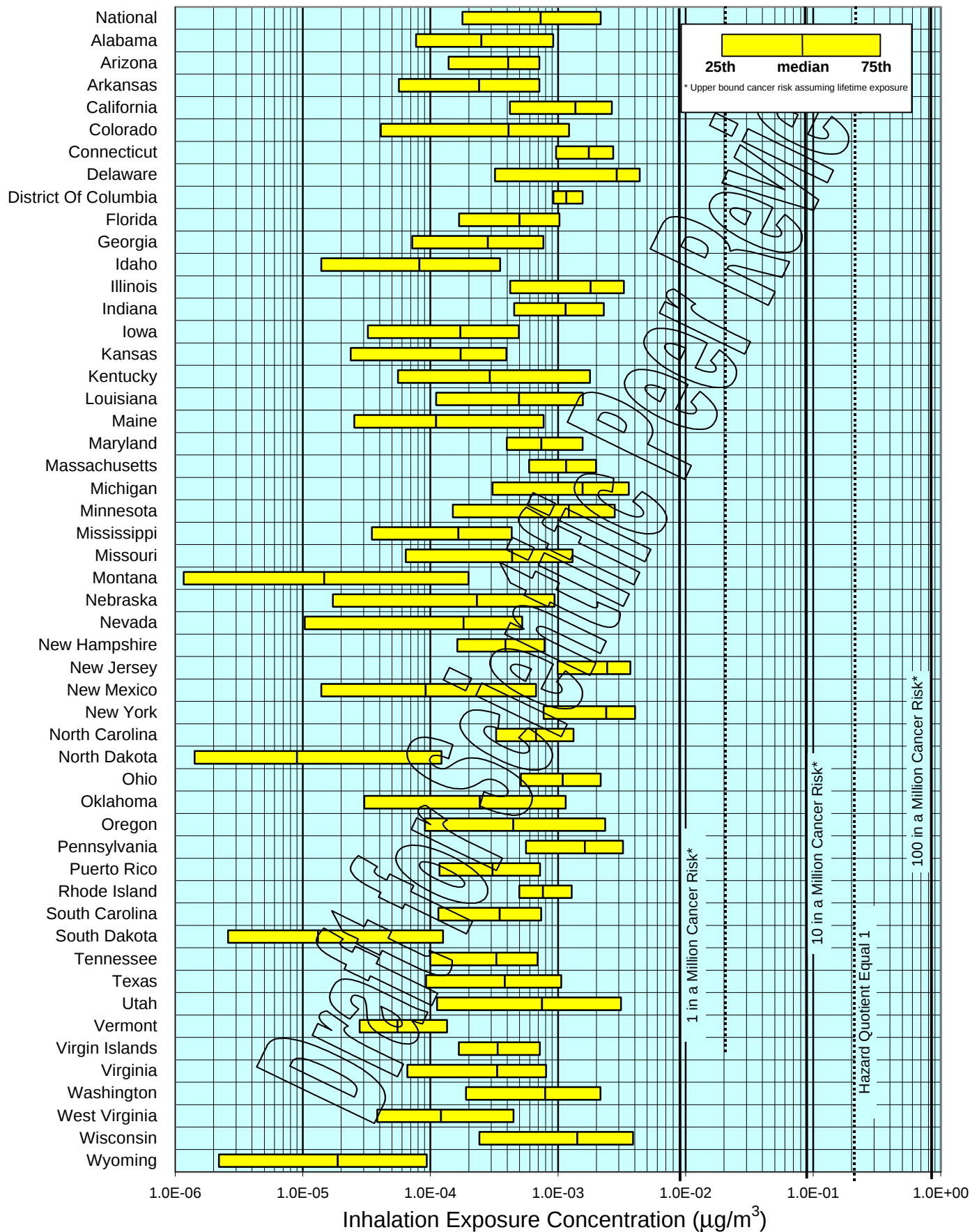


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

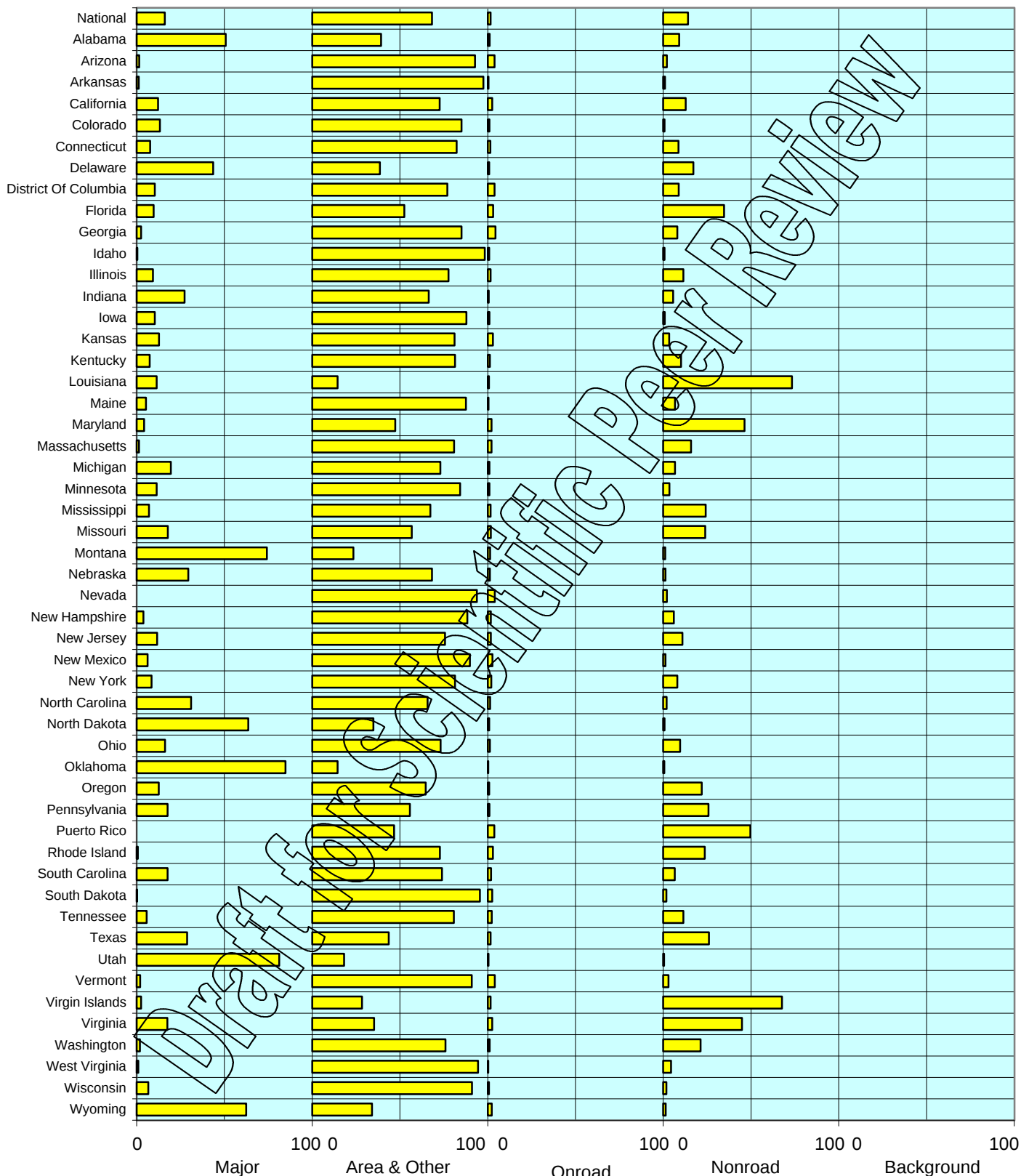
1996 Modeled Exposure Concentrations

Nickel - Statewide Concentration Distribution Estimates

(For Limitations On The Use of These Data See Page 2)

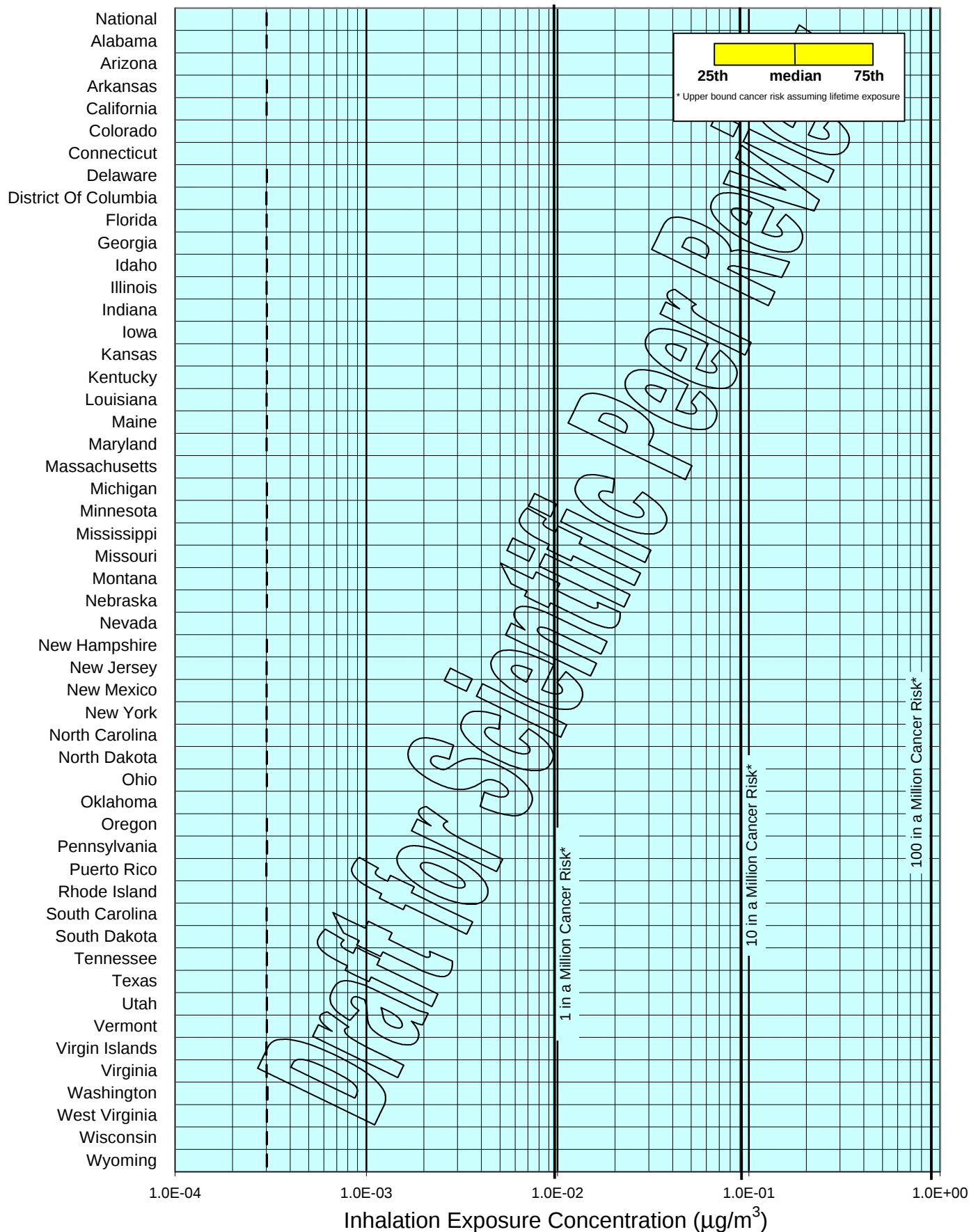


1996 Modeled Exposure Concentrations Nickel - Statewide Source Sector Contribution Estimates (For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

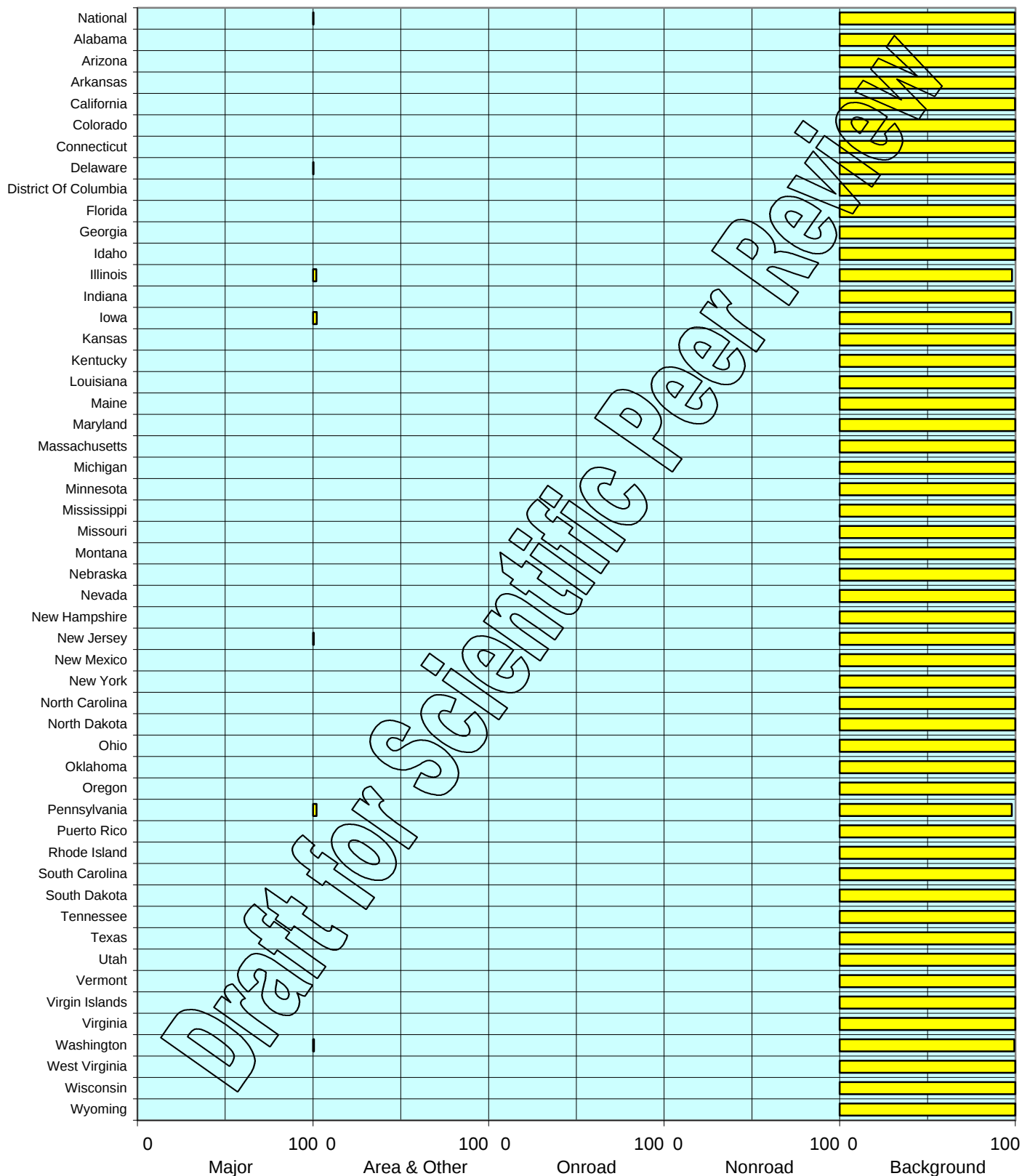
1996 Modeled Exposure Concentrations PCBs - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

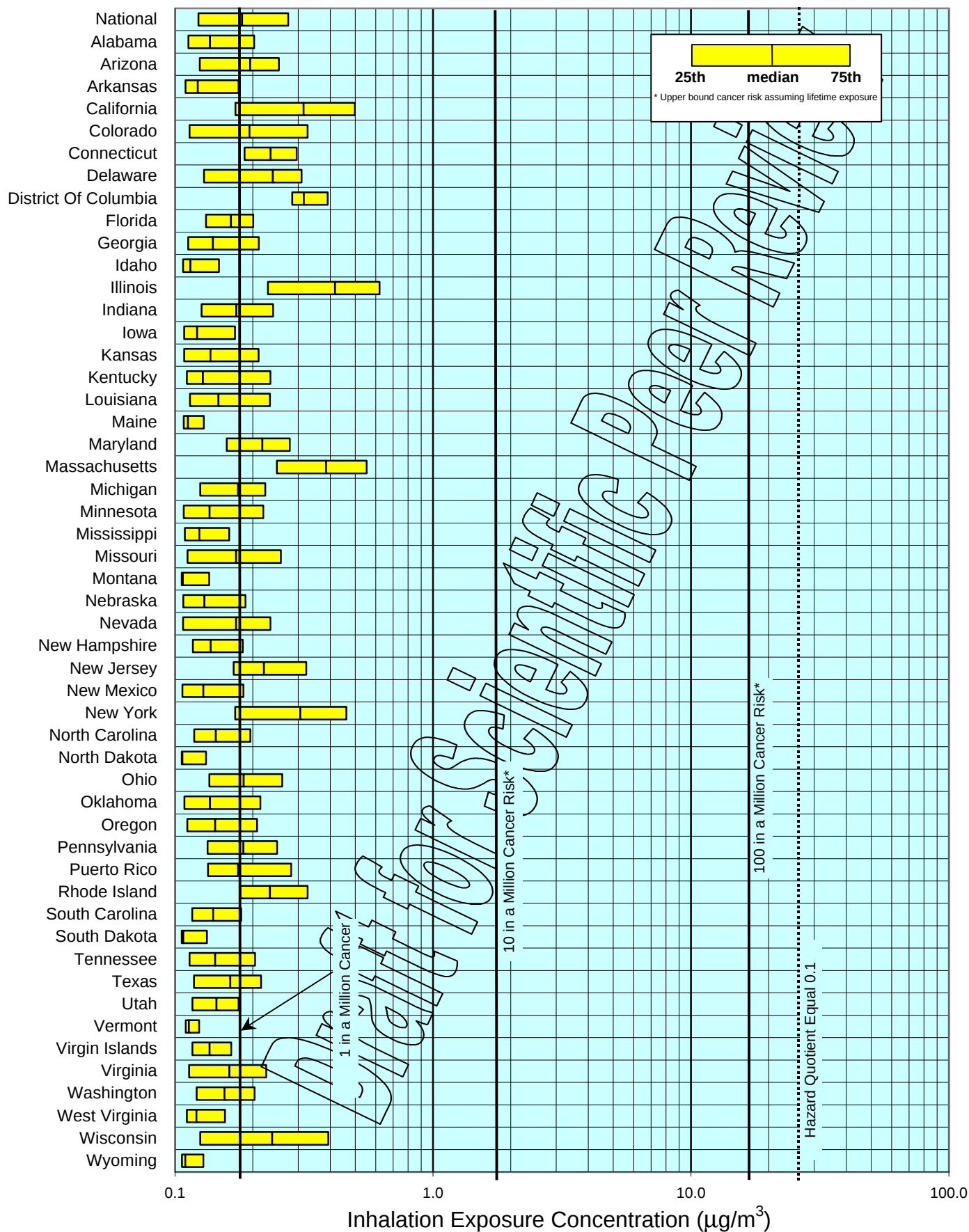
PCBs - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

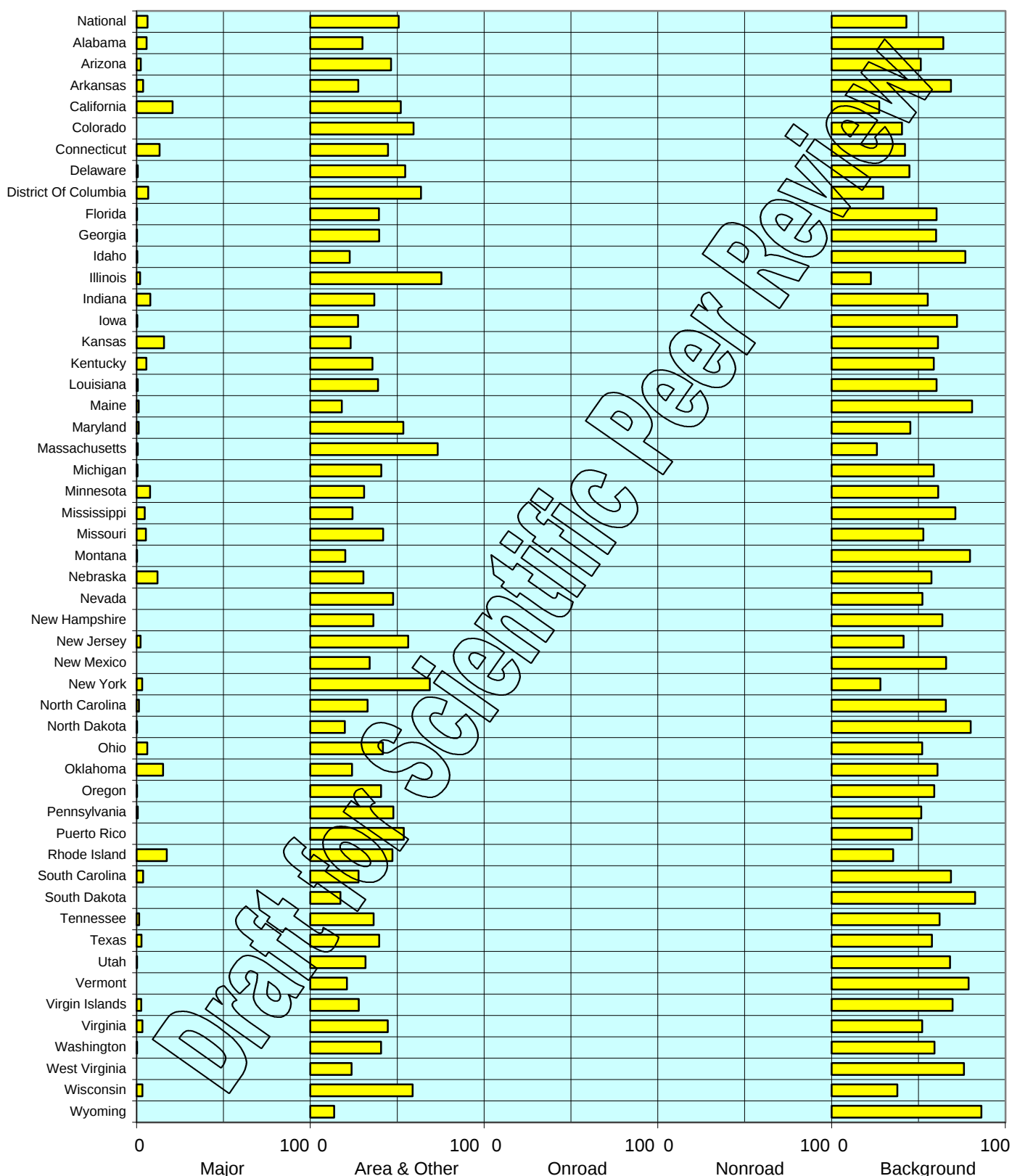
1996 Modeled Exposure Concentrations Perchloroethylene - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

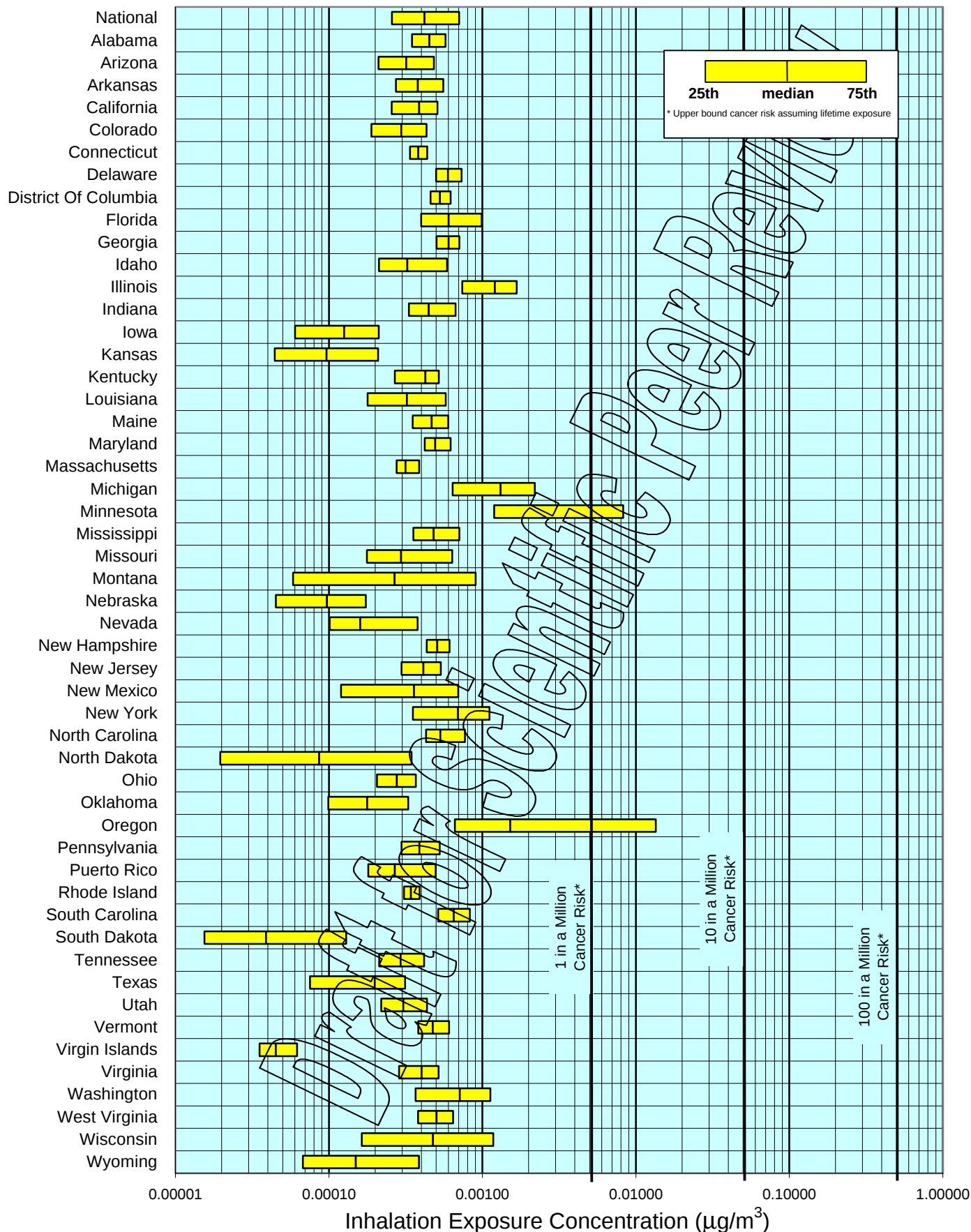
Perchloroethylene - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

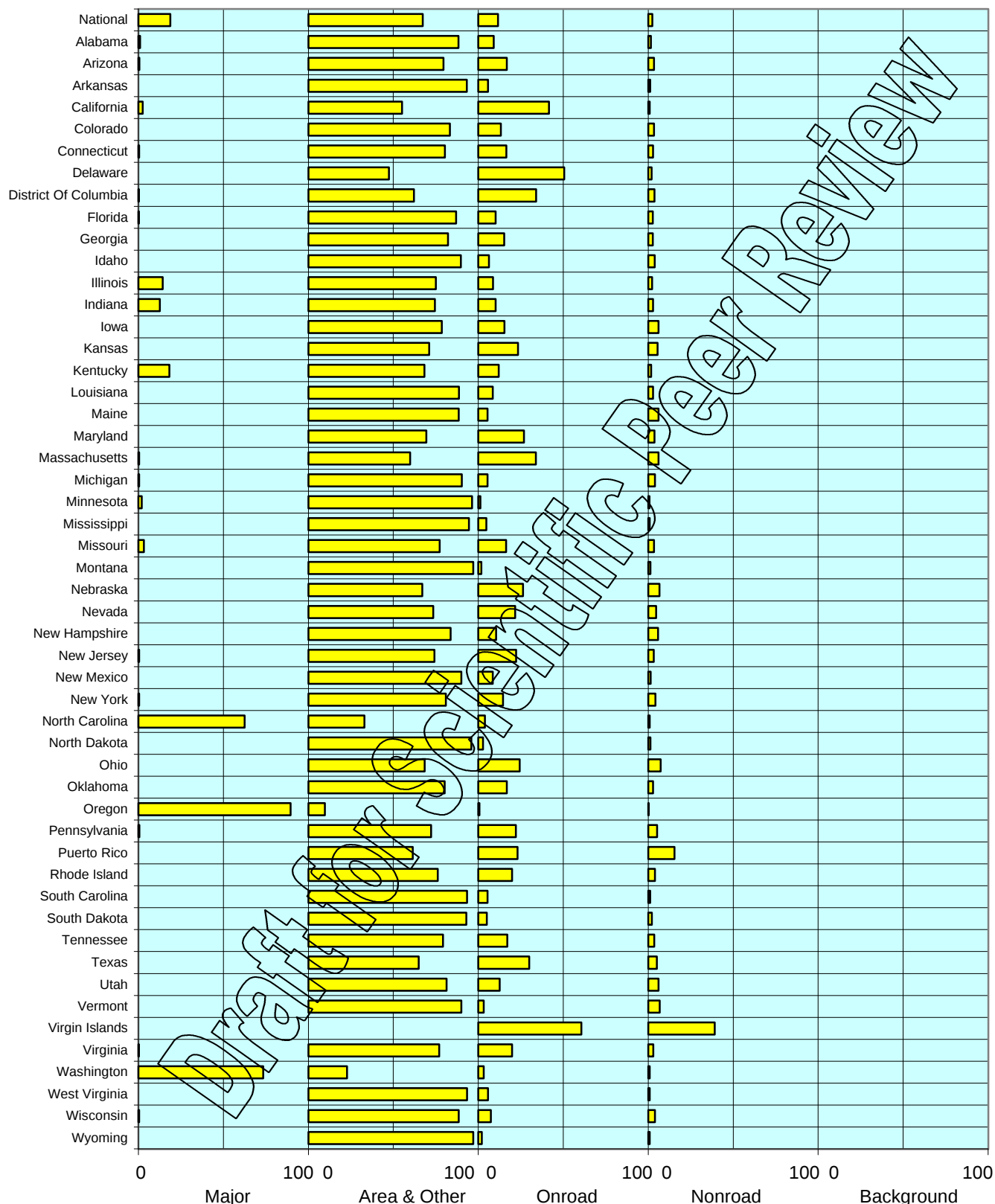


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations POM (7-PAH) - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)

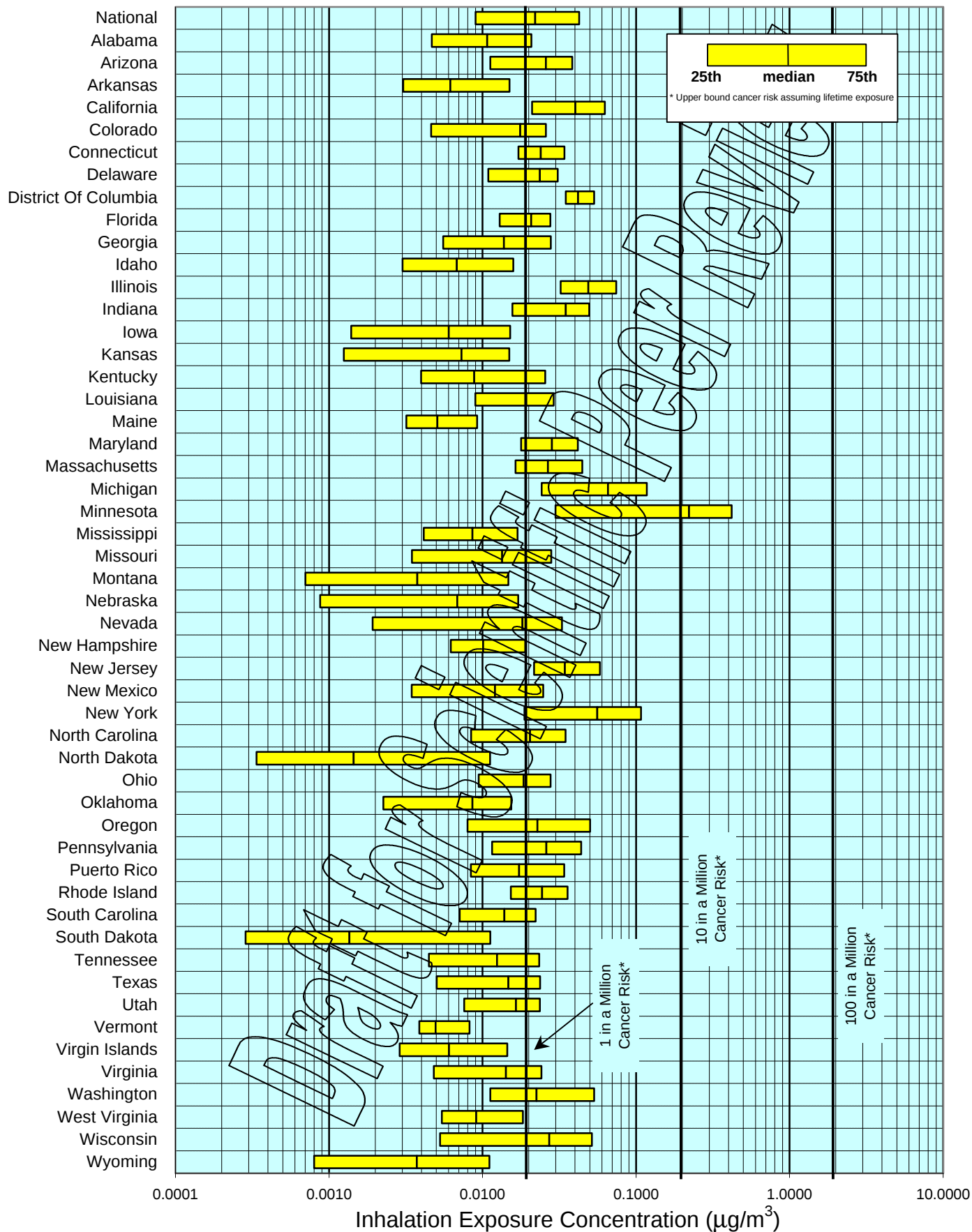


1996 Modeled Exposure Concentrations POM (7-PAH) - Statewide Source Sector Contribution Estimates (For Limitations On The Use of These Data See Page 2)

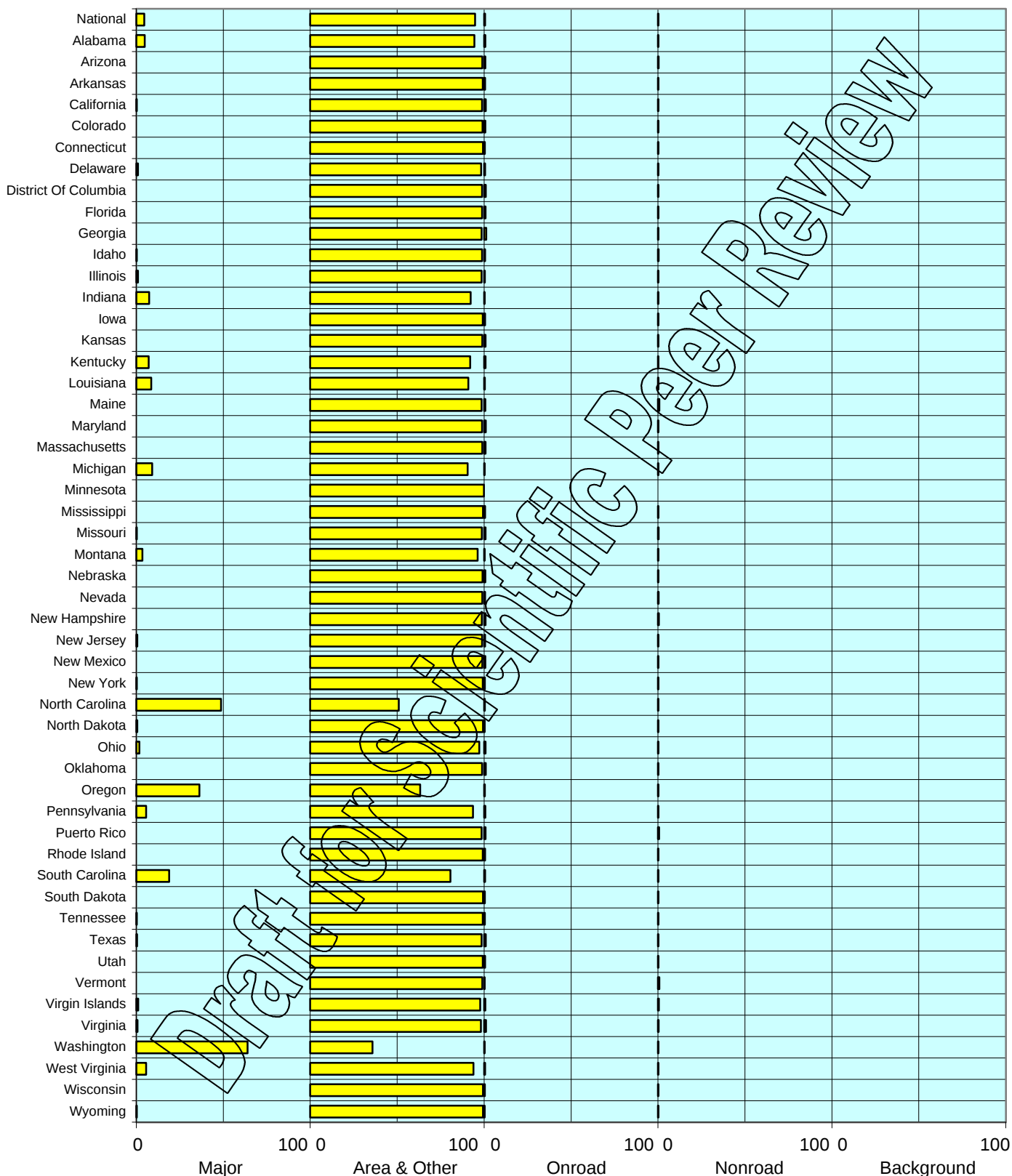


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations POM (total) - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations POM (total) - Statewide Source Sector Contribution Estimates (For Limitations On The Use of These Data See Page 2)

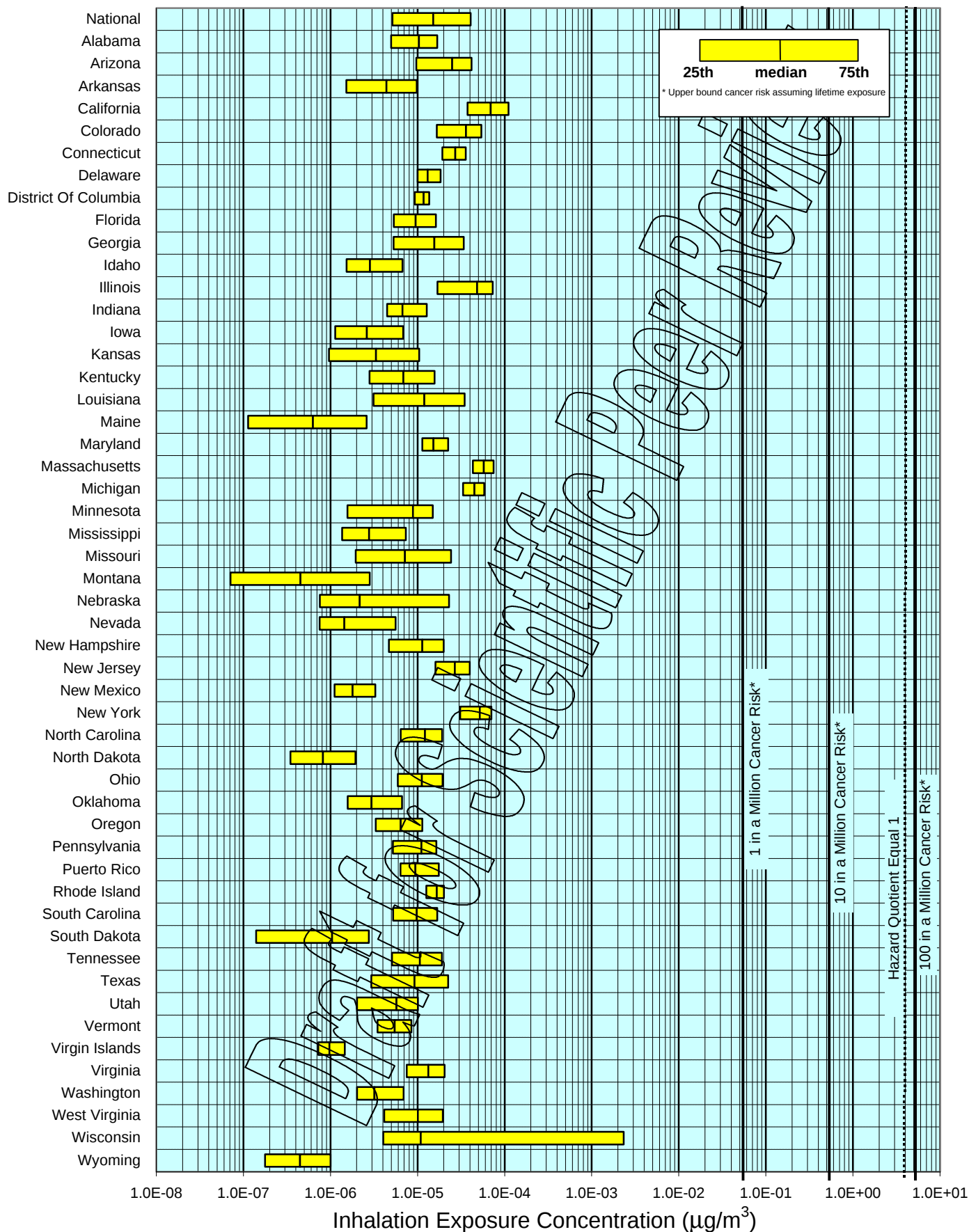


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Propylene Dichloride - Statewide Concentration Distribution Estimates

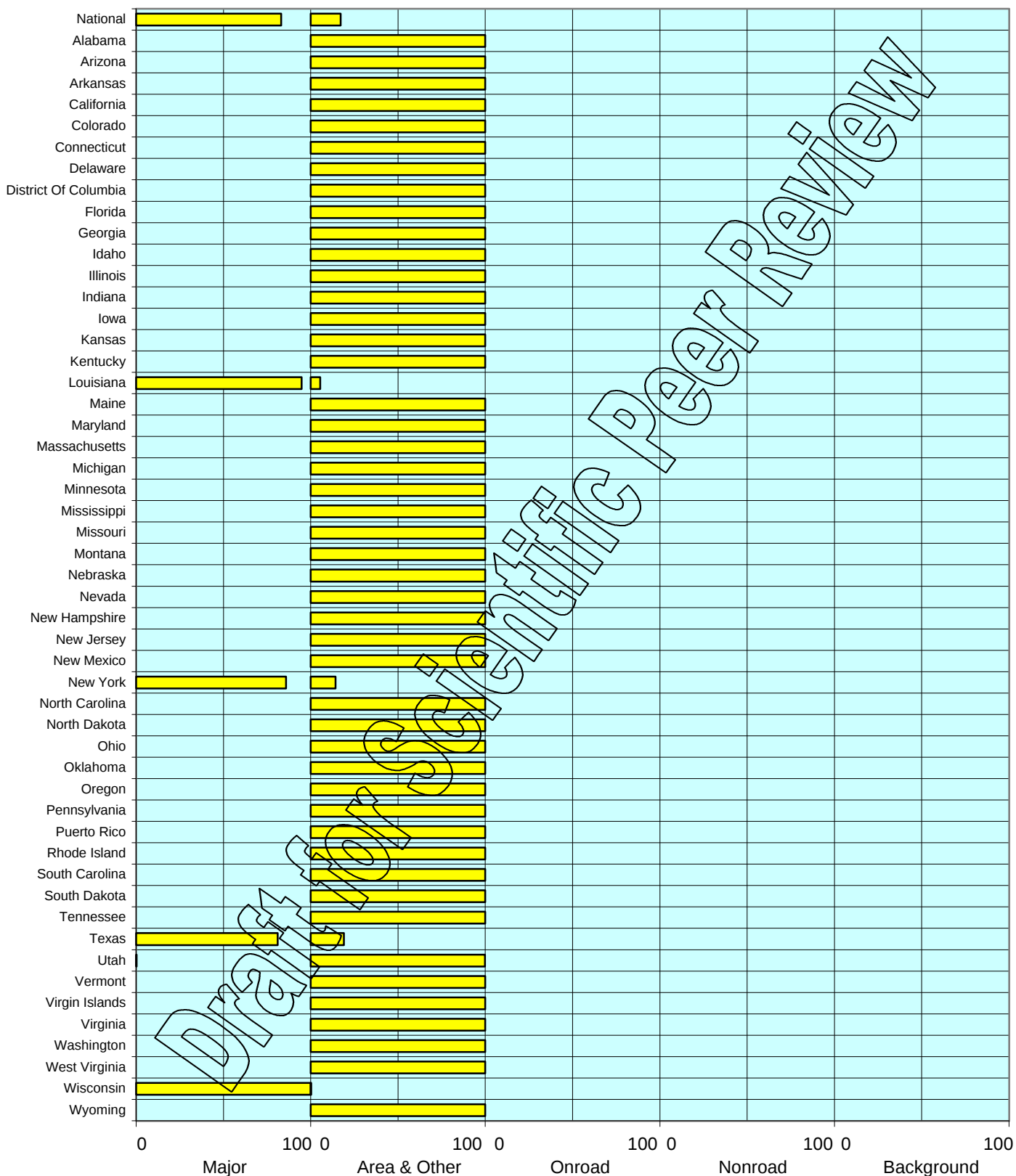
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1996 Modeled Exposure Concentrations

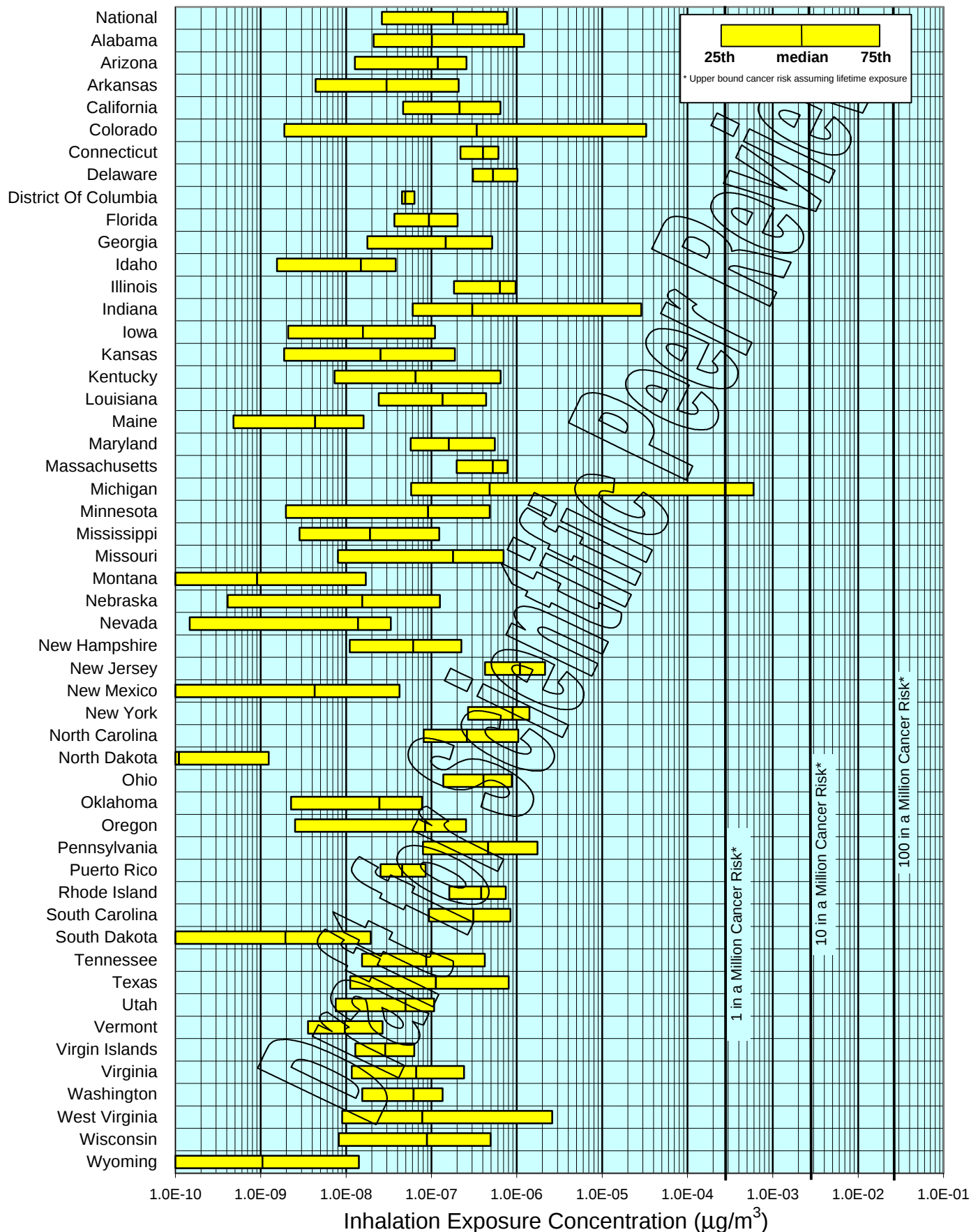
Propylene Dichloride - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

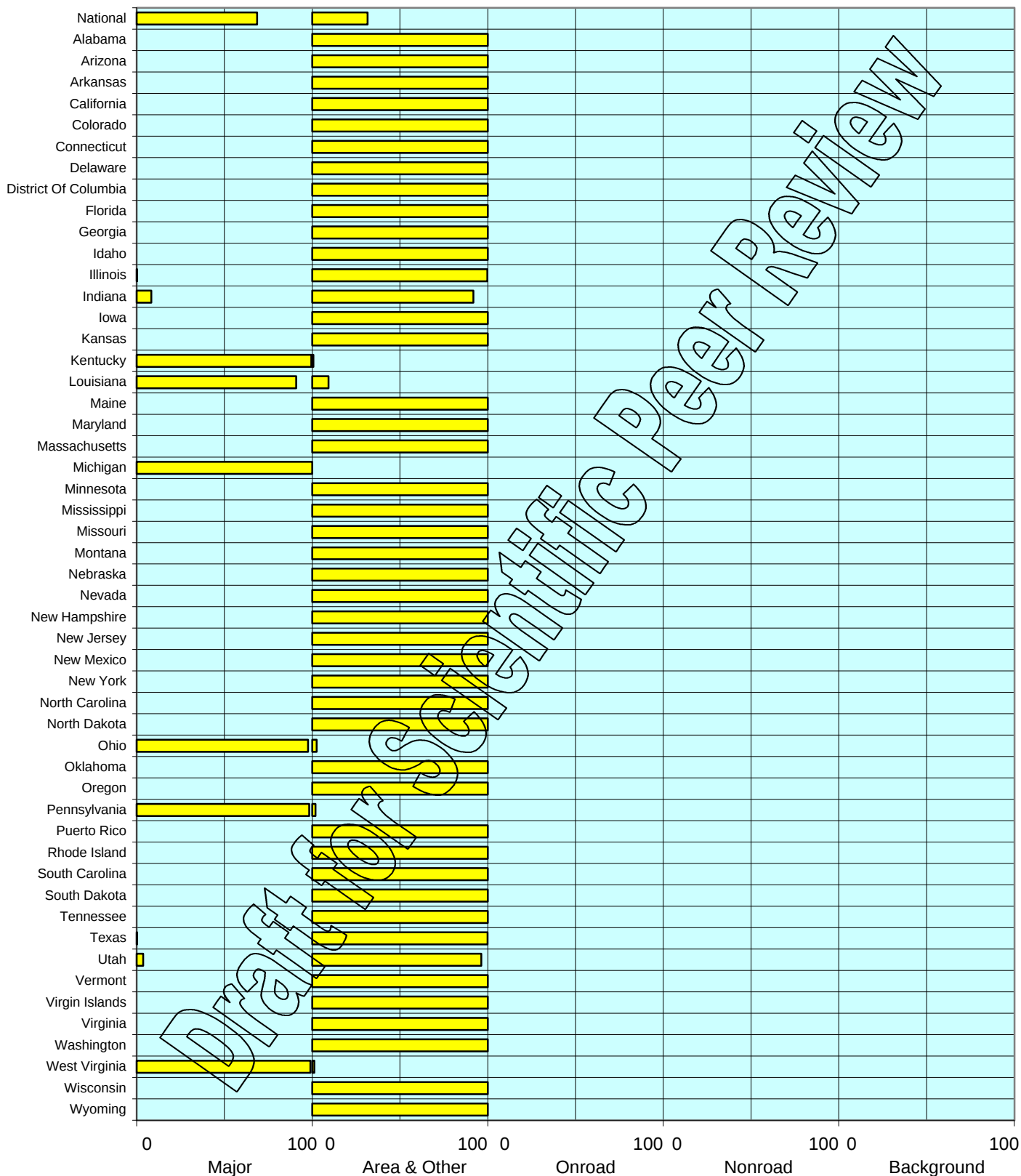
1996 Modeled Exposure Concentrations Quinoline - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

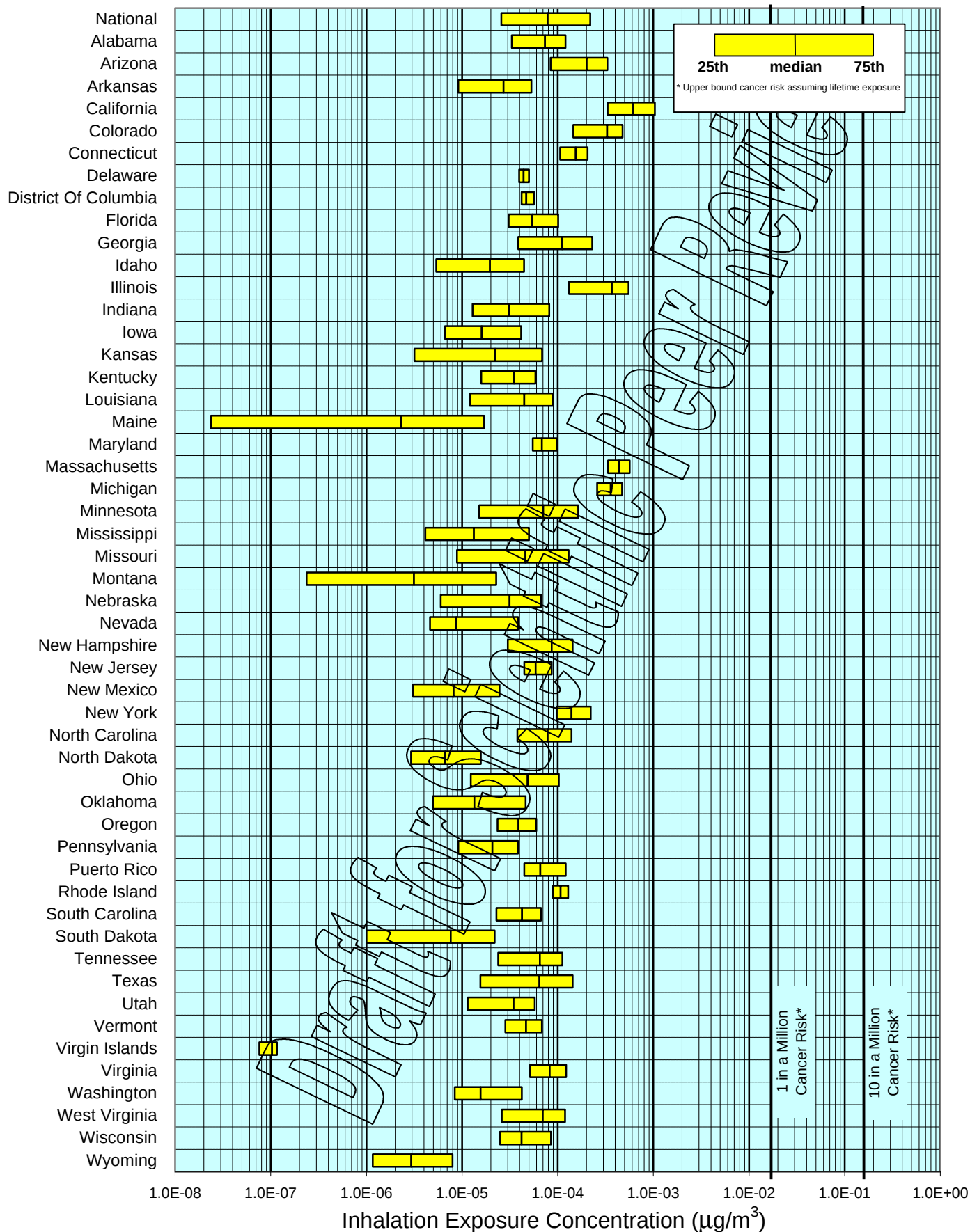
Quinoline - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

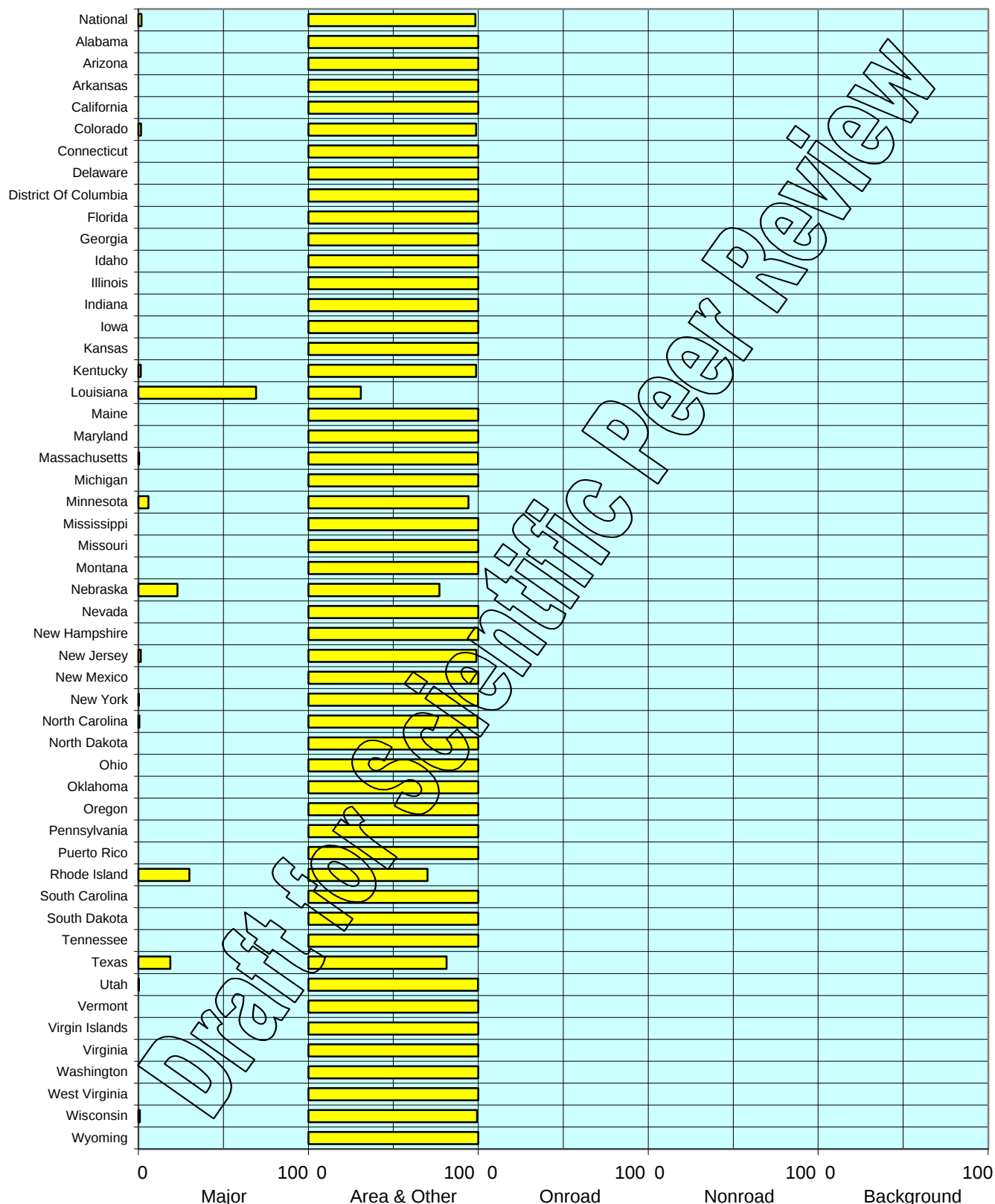


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations 1,1,2,2-TCA - Statewide Concentration Distribution Estimates (For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations 1,1,2,2-TCA - Statewide Source Sector Contribution Estimates (For Limitations On The Use of These Data See Page 2)

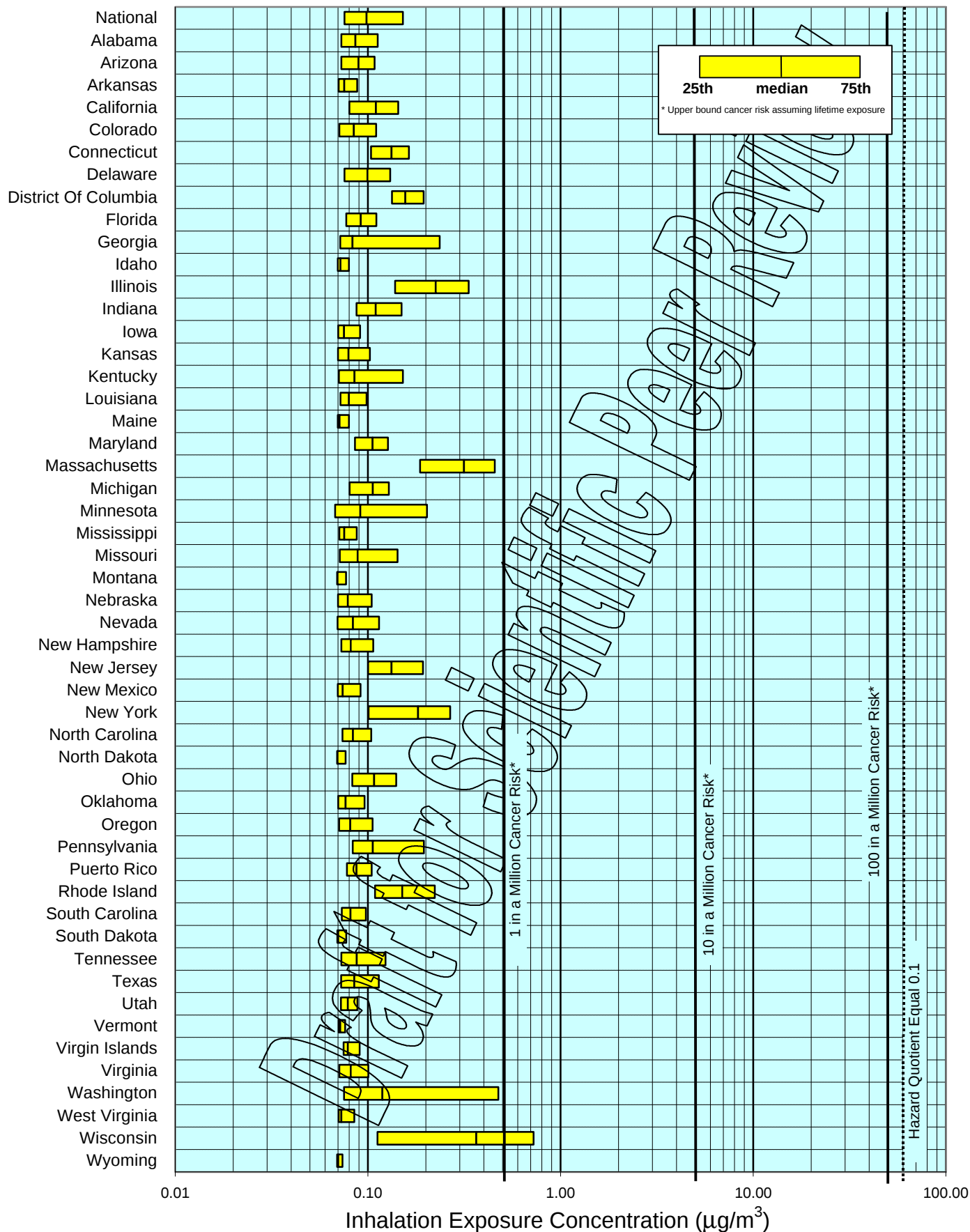


Percent Contribution to Statewide Annual Average Exposure Concentration

1996 Modeled Exposure Concentrations

Trichloroethylene - Statewide Concentration Distribution Estimates

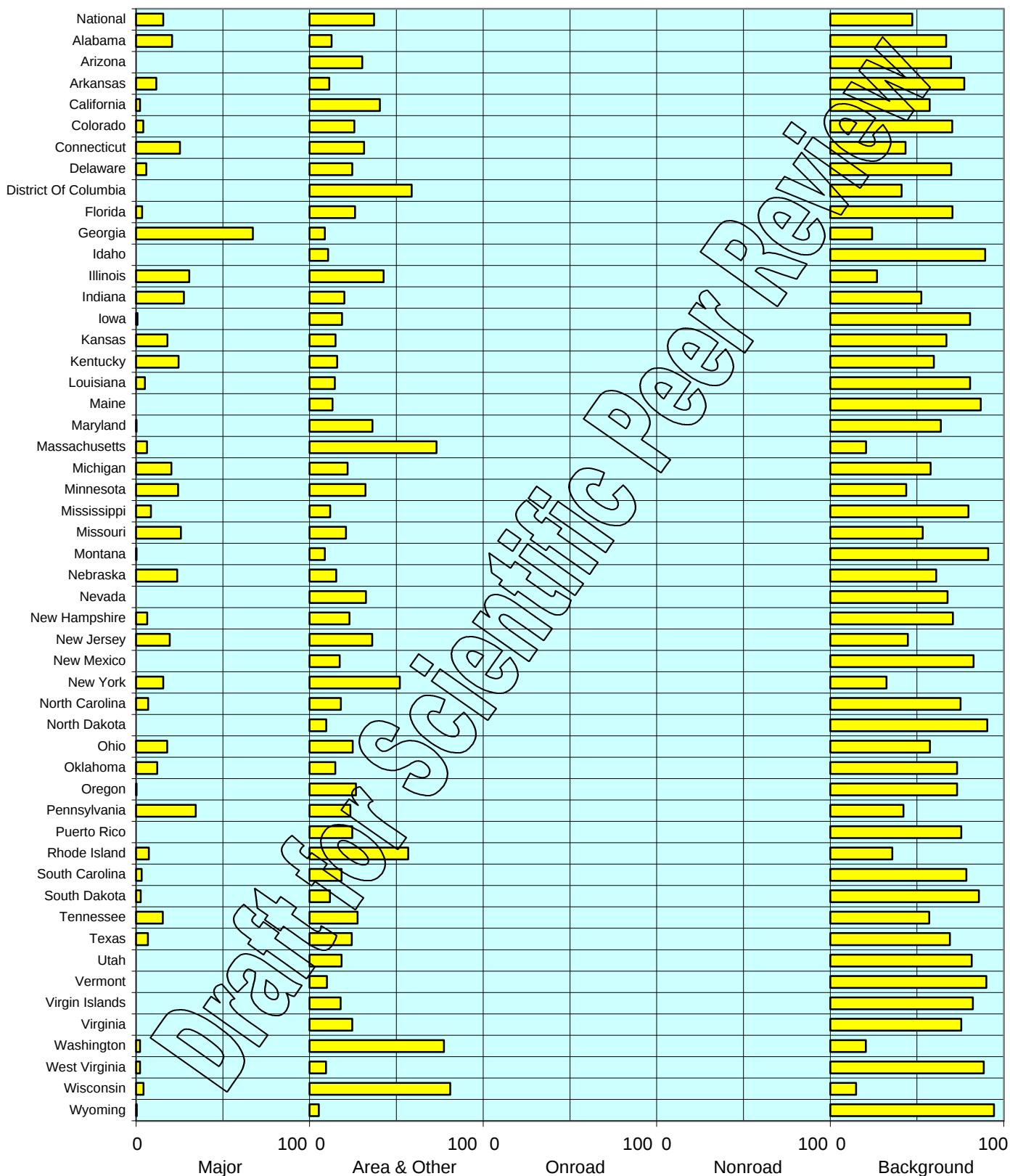
(For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

Trichloroethylene - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)

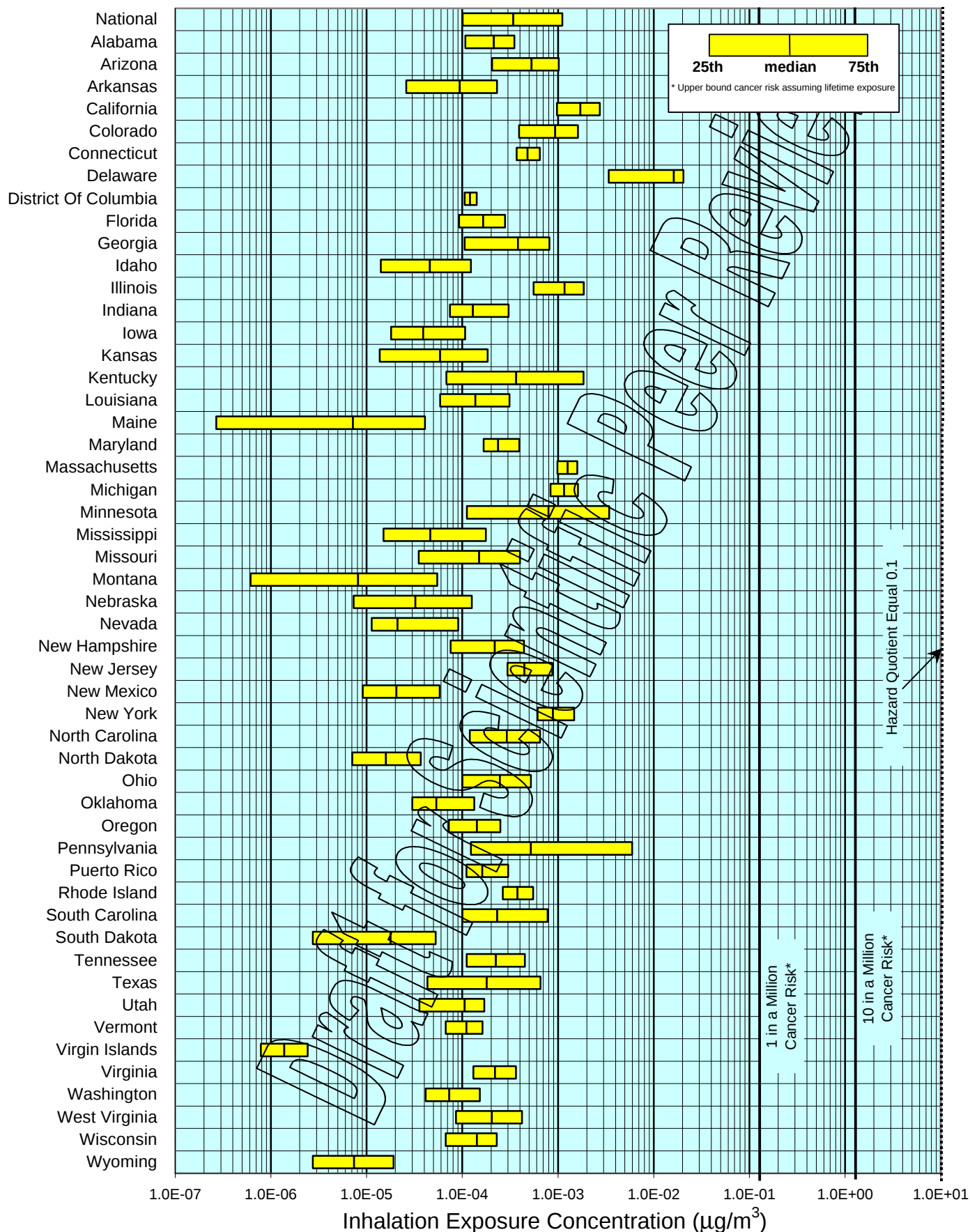


Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

1996 Modeled Exposure Concentrations

Vinyl Chloride - Statewide Concentration Distribution Estimates

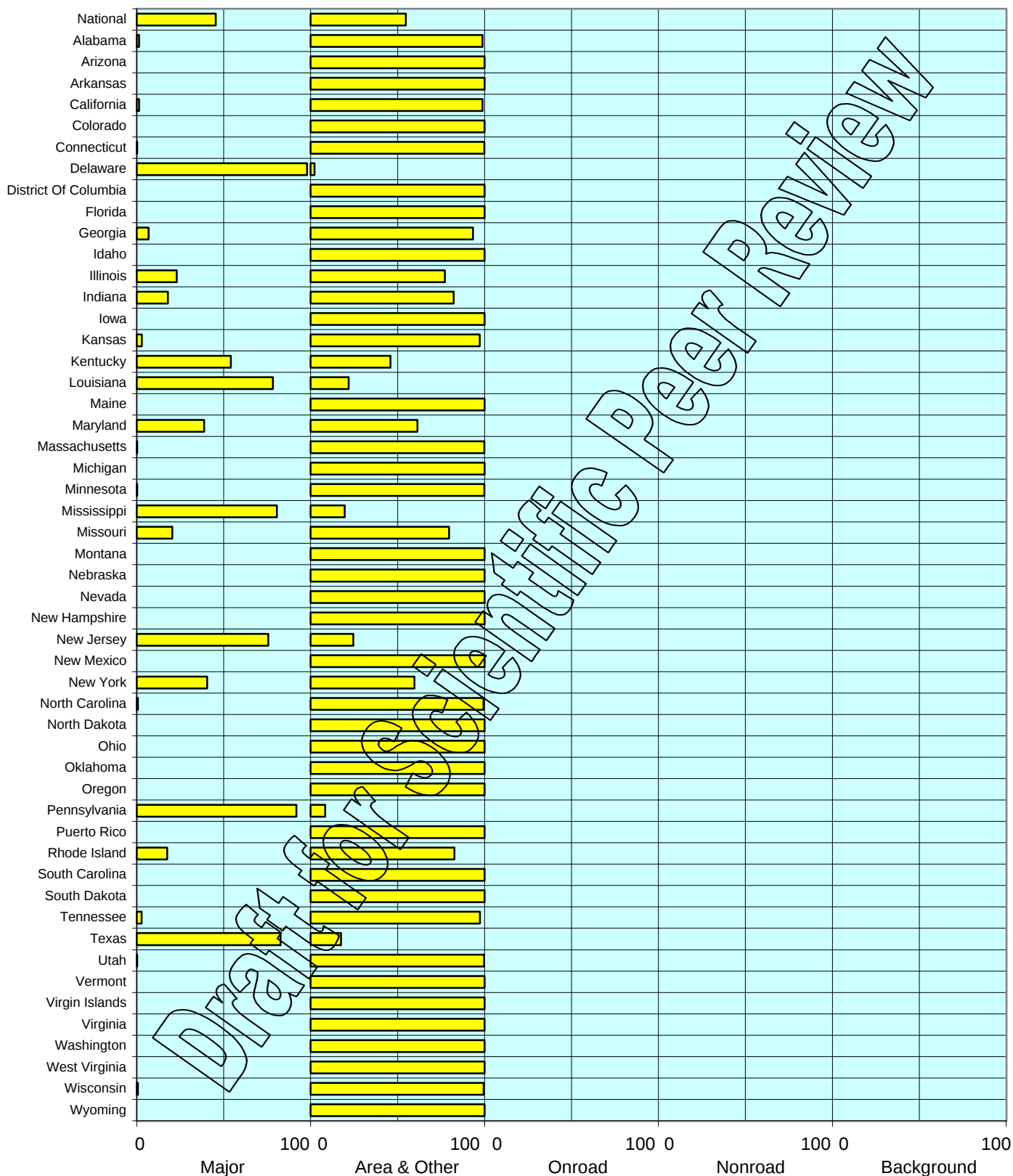
(For Limitations On The Use of These Data See Page 2)



1996 Modeled Exposure Concentrations

Vinyl Chloride - Statewide Source Sector Contribution Estimates

(For Limitations On The Use of These Data See Page 2)



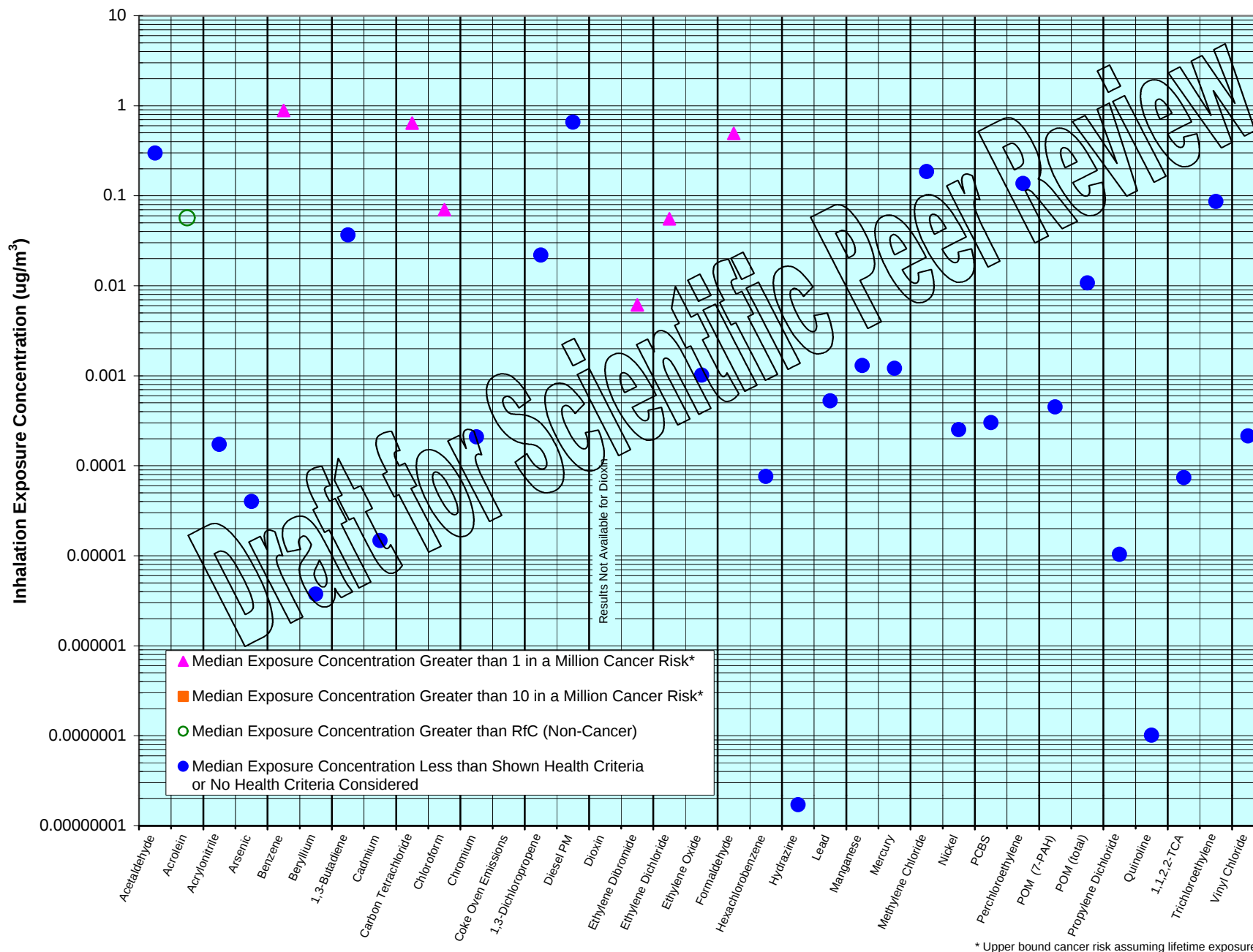
Percent Contribution to Statewide Annual Average Exposure Concentration Estimates

State Summary Exposure Concentration Estimate Charts

(Charts presented in alphabetical order by state)

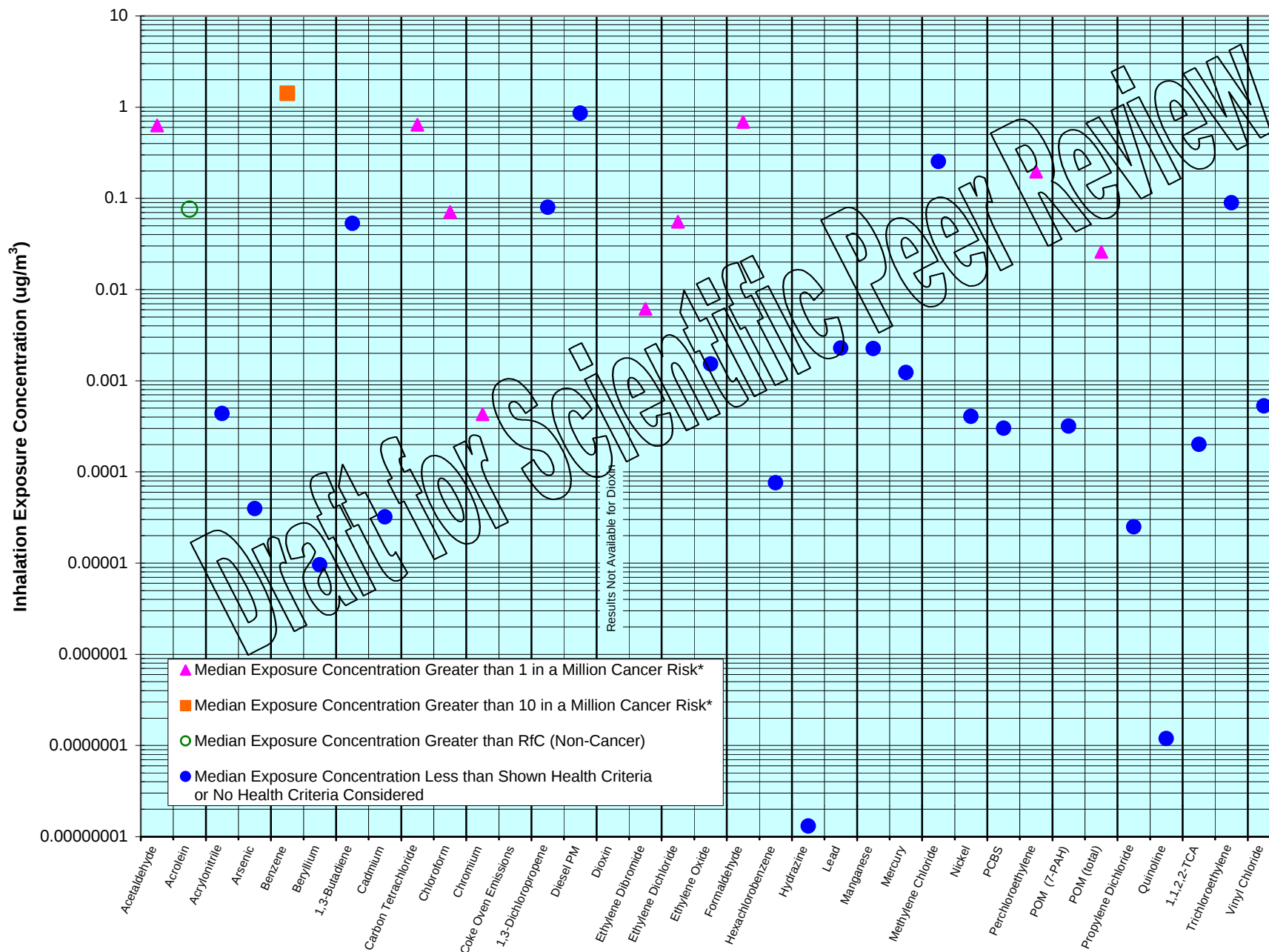
(The "Page 2" referred to on each chart has been provided at end of the appendix.)

1996 Modeled Median Exposure Concentrations for Alabama (For Limitations On The Use of These Data See Page 2)



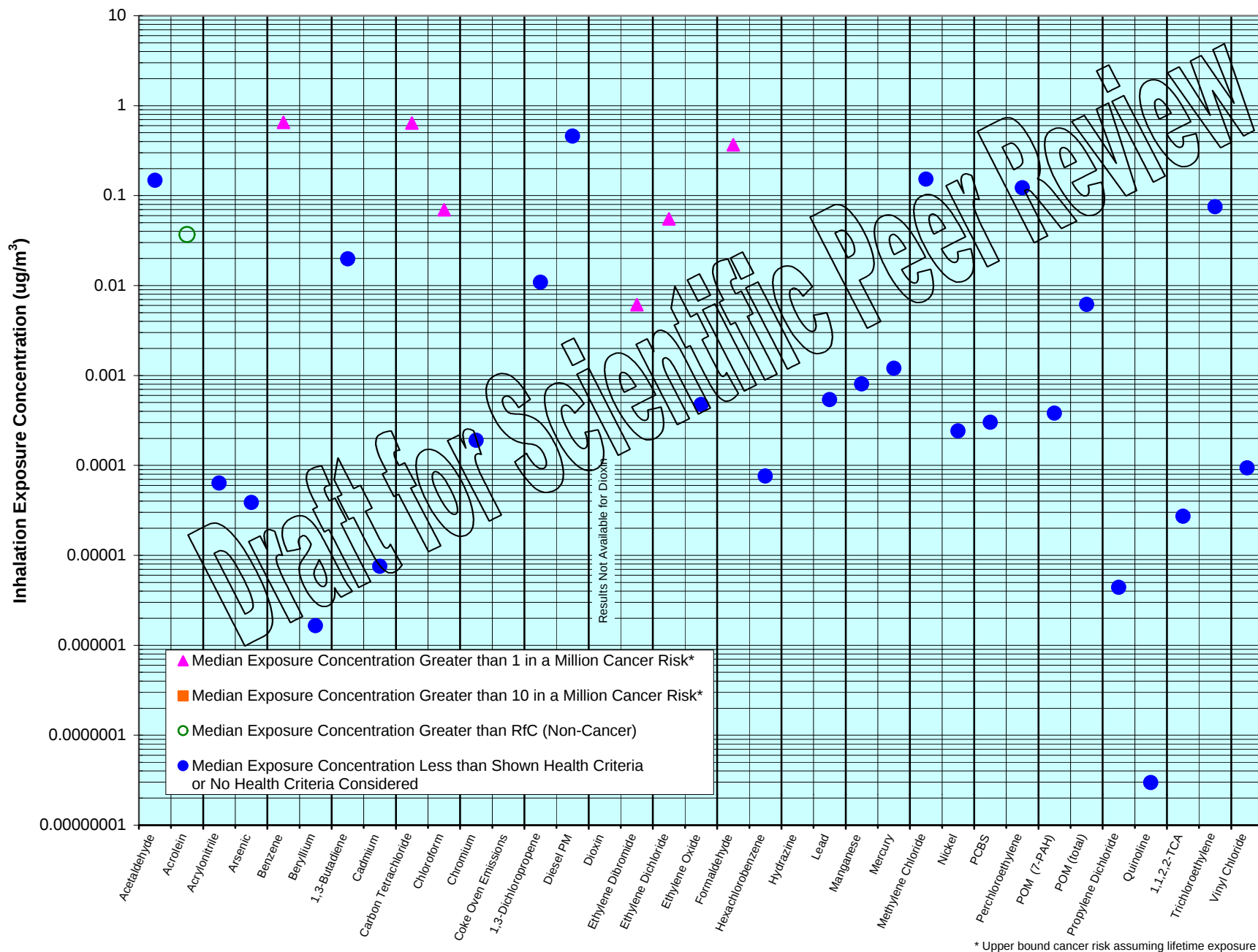
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Arizona (For Limitations On The Use of These Data See Page 2)



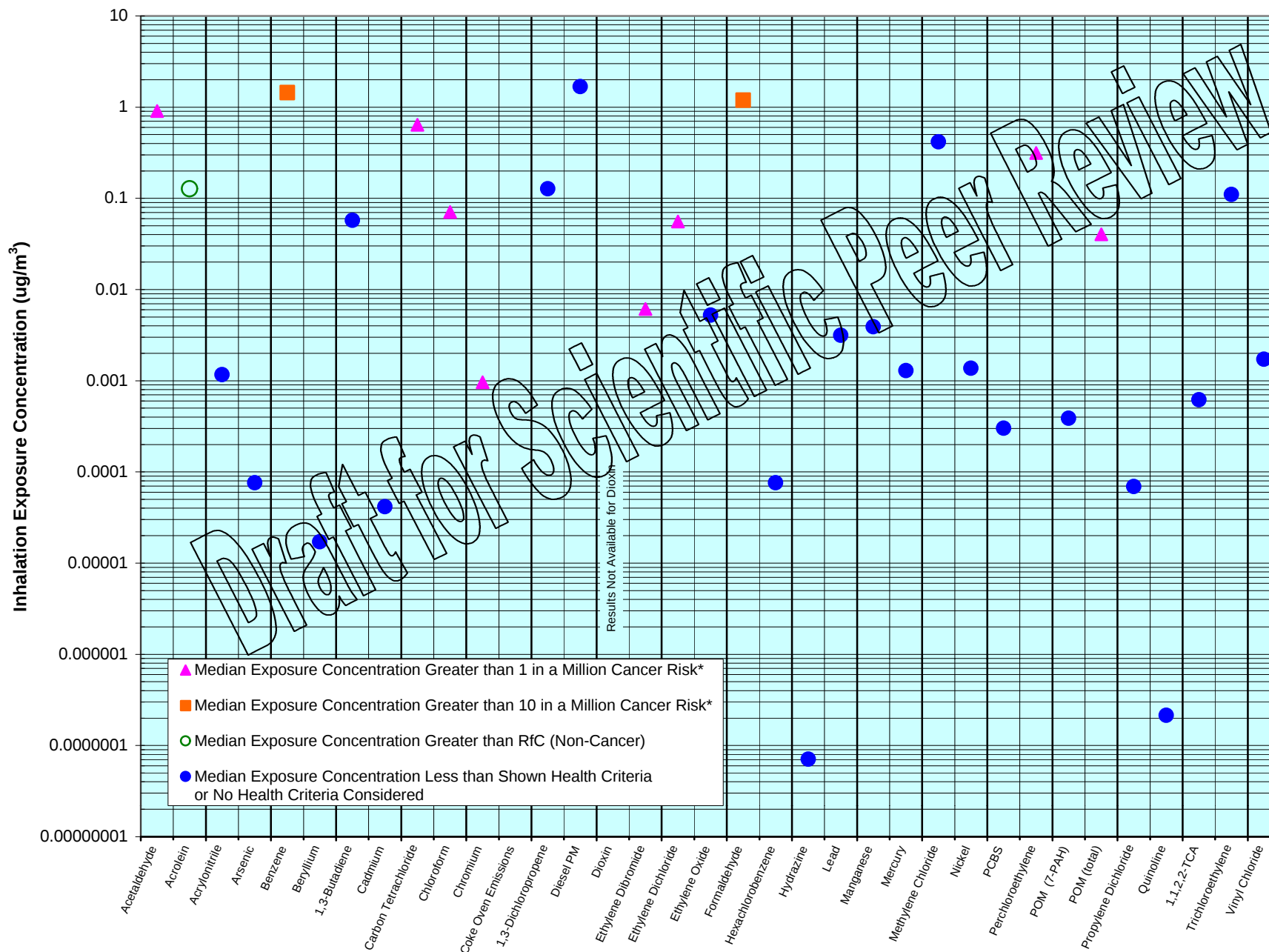
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Arkansas
(For Limitations On The Use of These Data See Page 2)



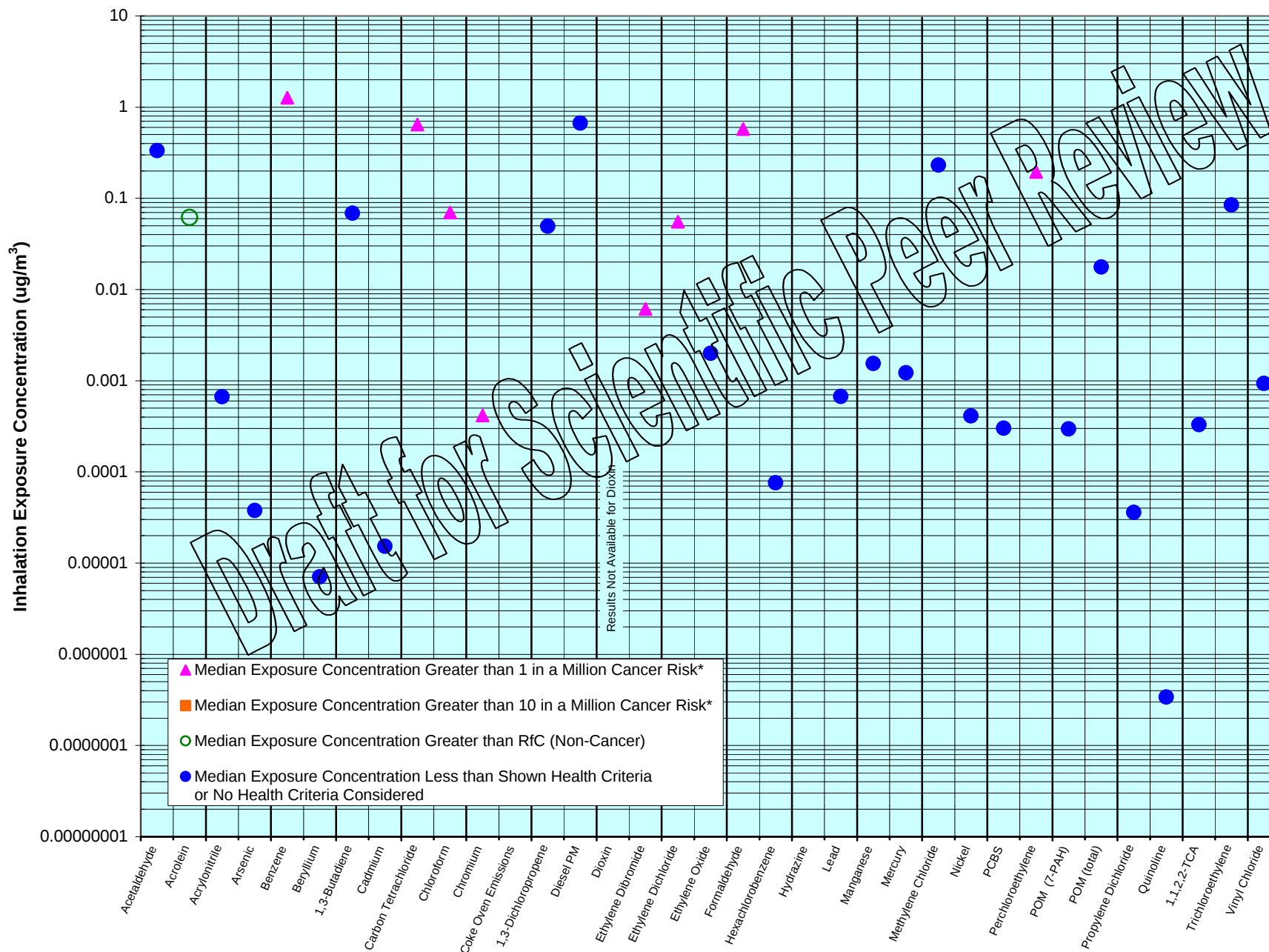
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for California (For Limitations On The Use of These Data See Page 2)



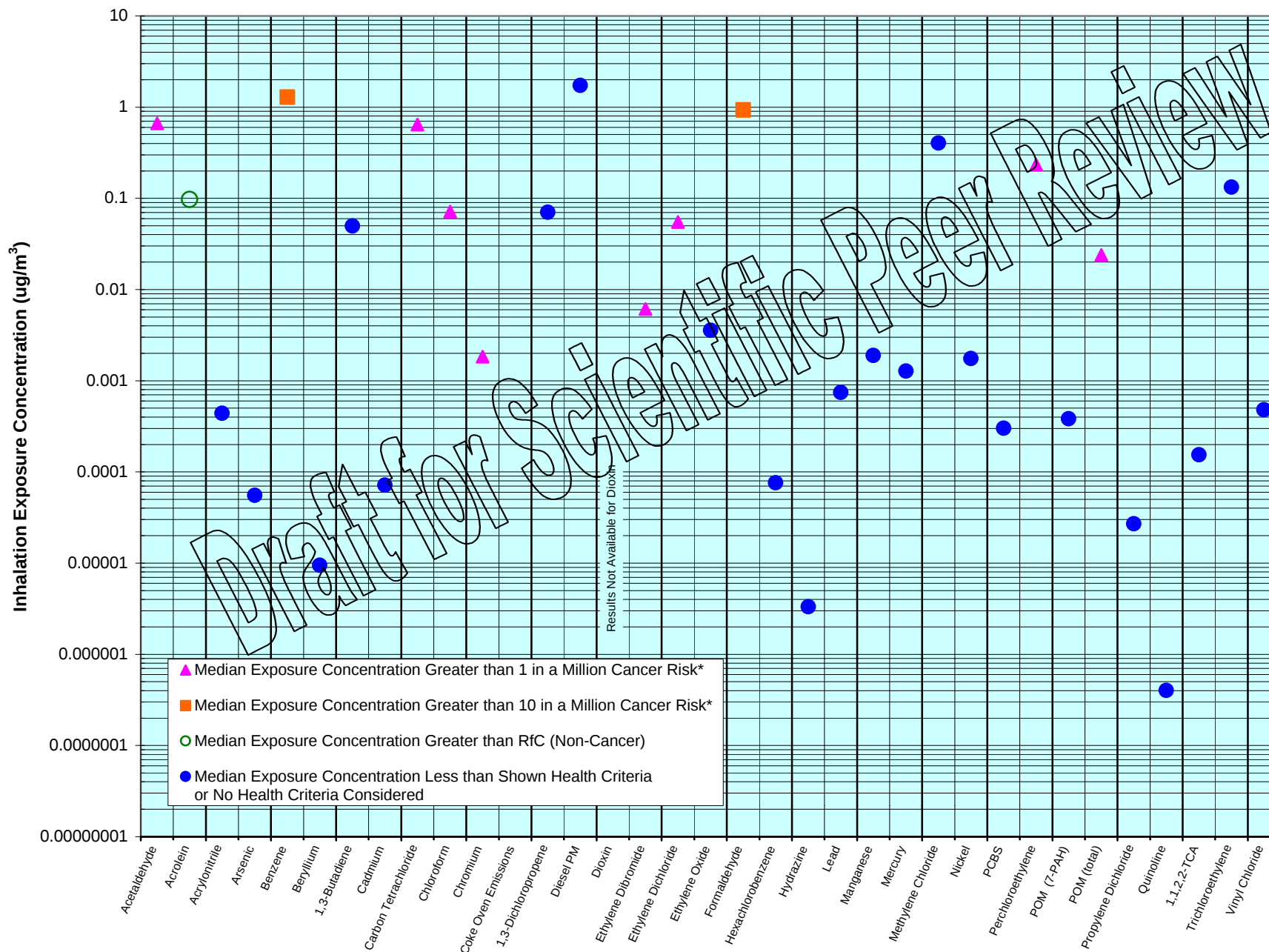
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Colorado (For Limitations On The Use of These Data See Page 2)



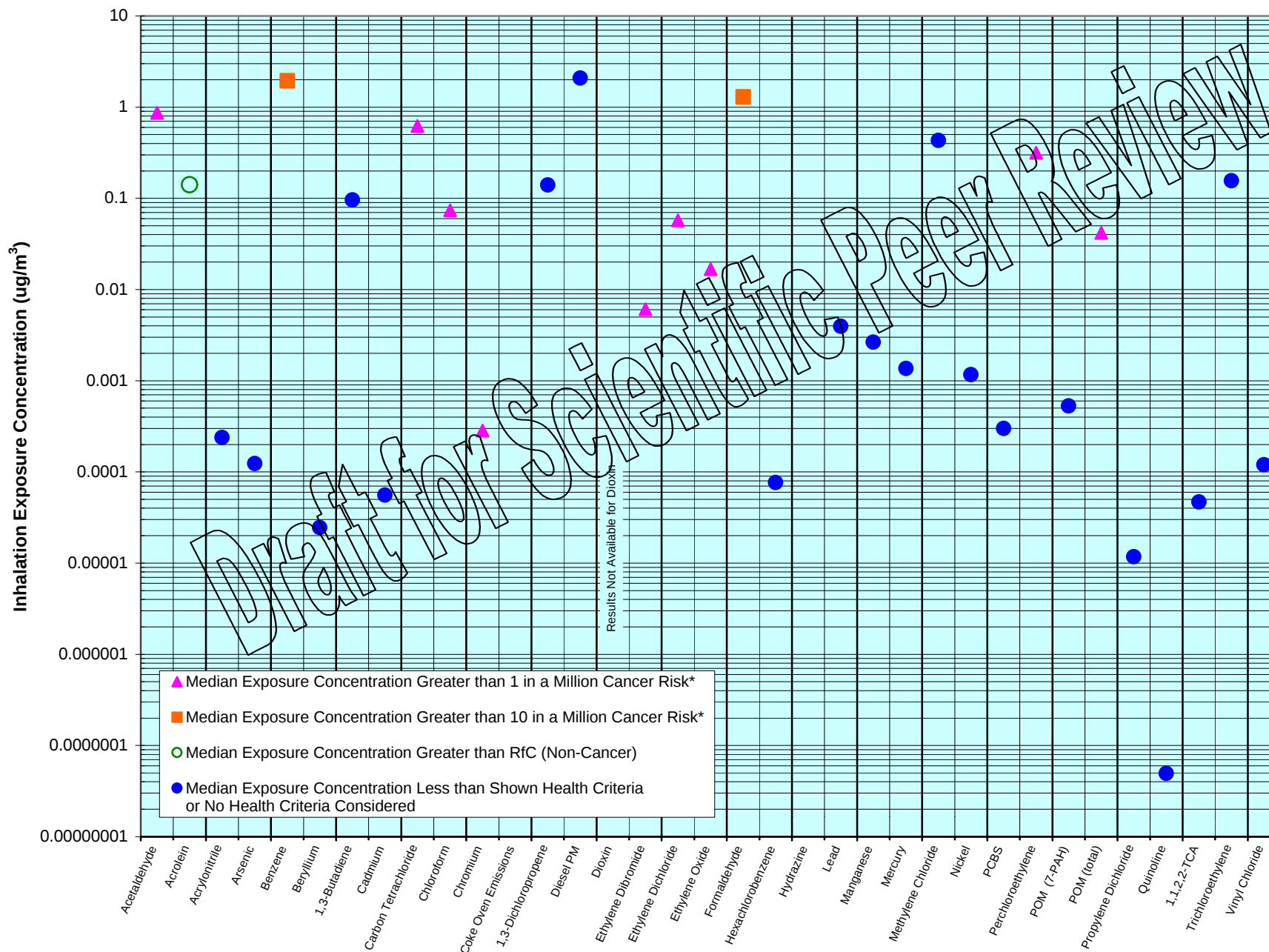
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Connecticut (For Limitations On The Use of These Data See Page 2)



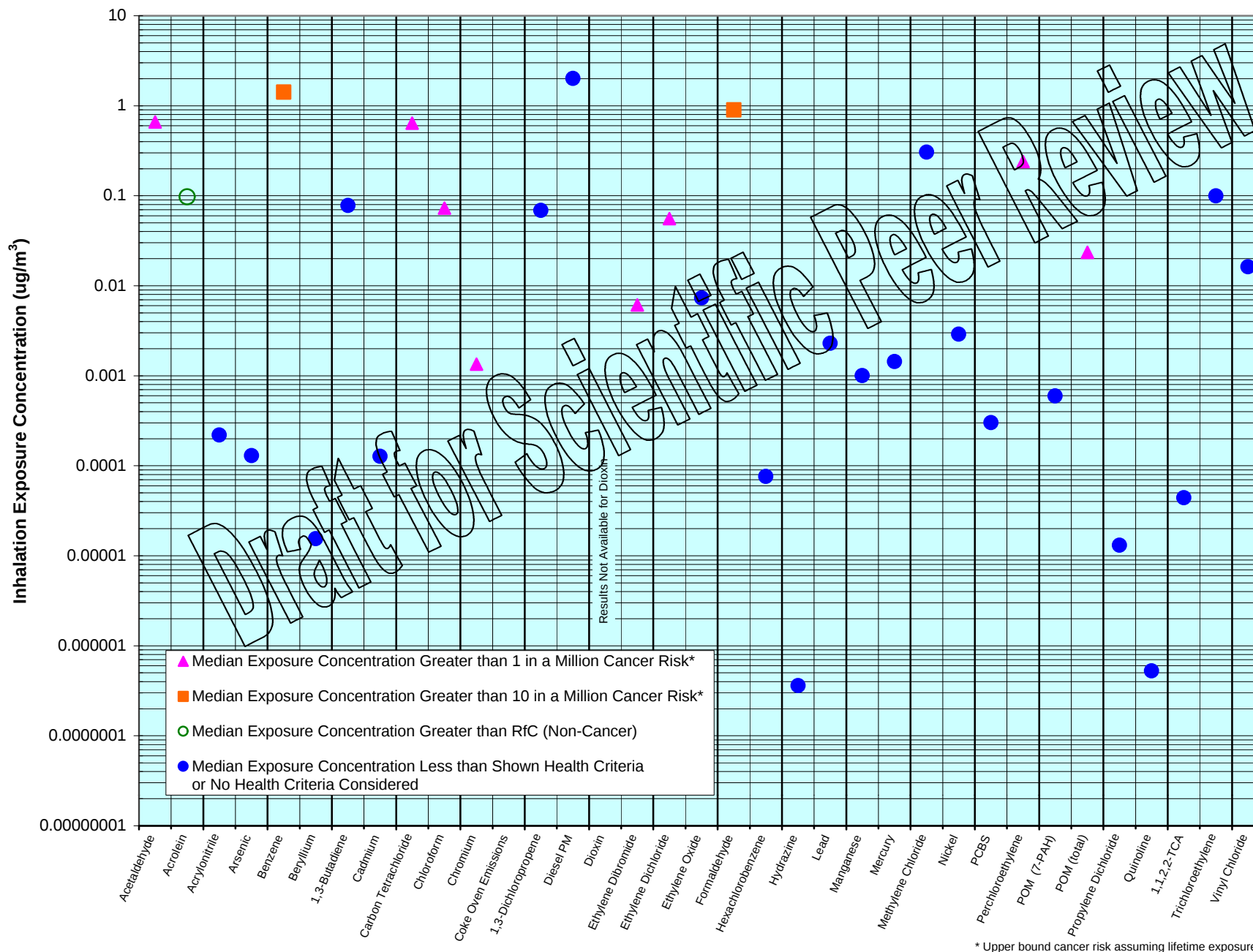
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for District Of Columbia (For Limitations On The Use of These Data See Page 2)



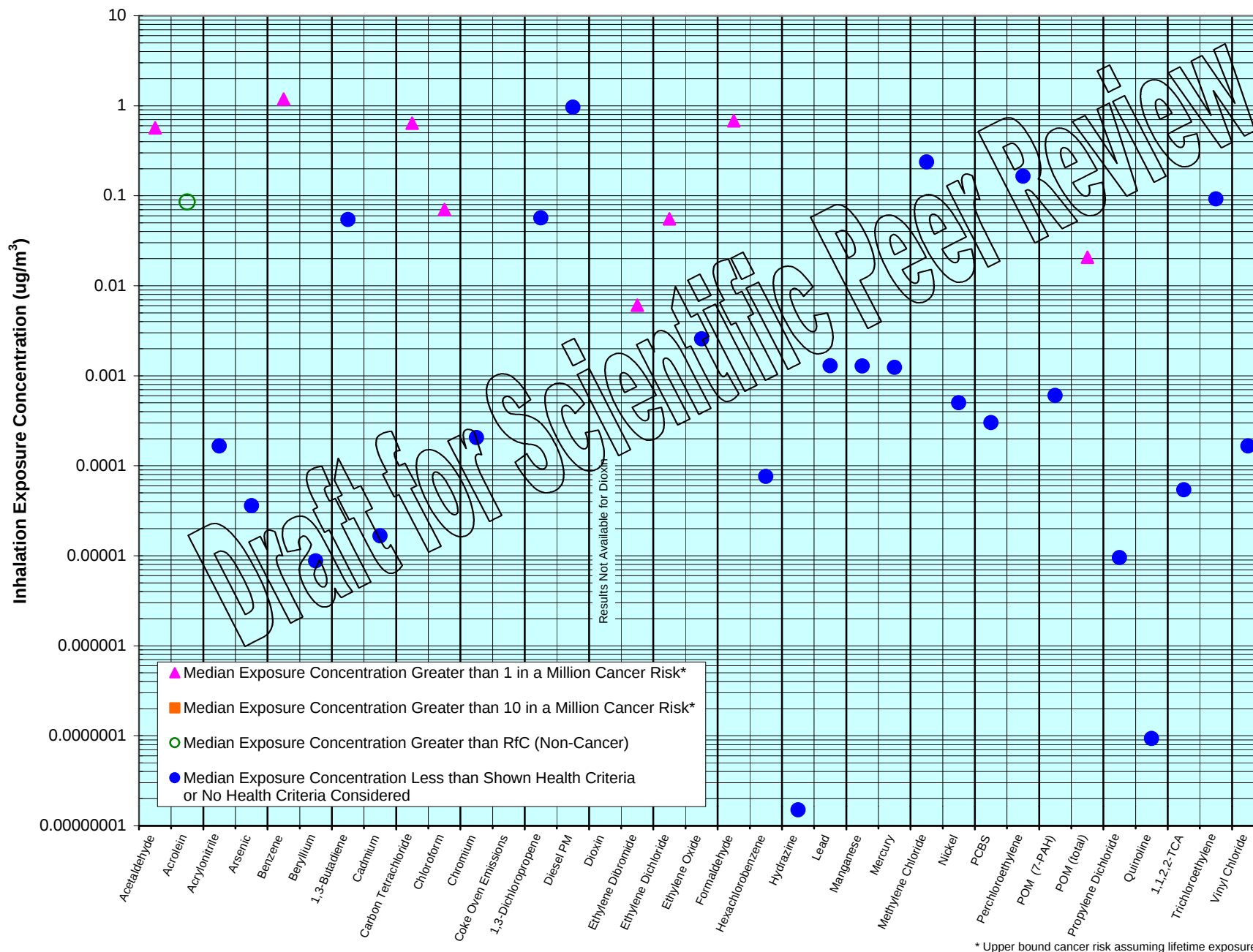
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Delaware (For Limitations On The Use of These Data See Page 2)



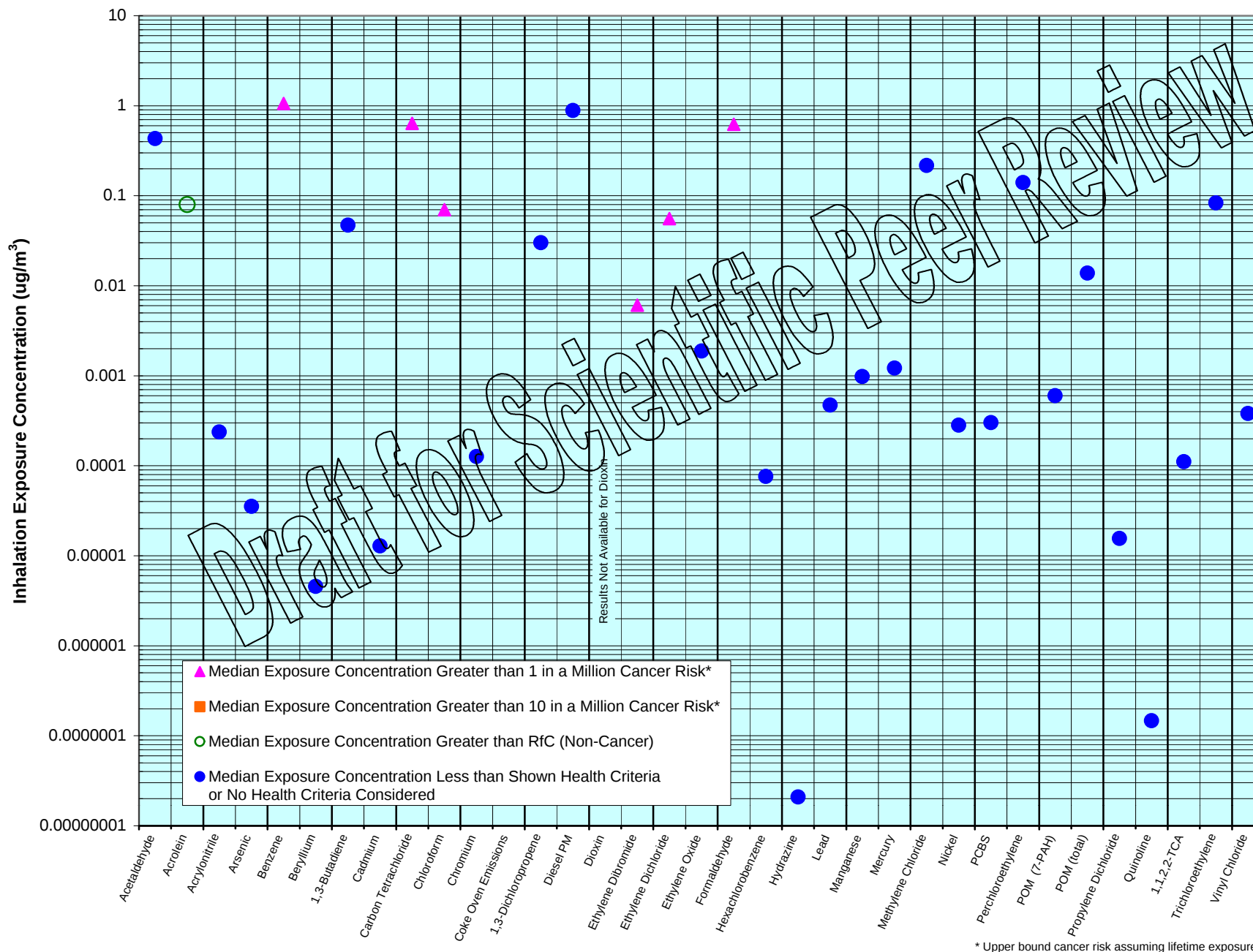
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Florida
(For Limitations On The Use of These Data See Page 2)

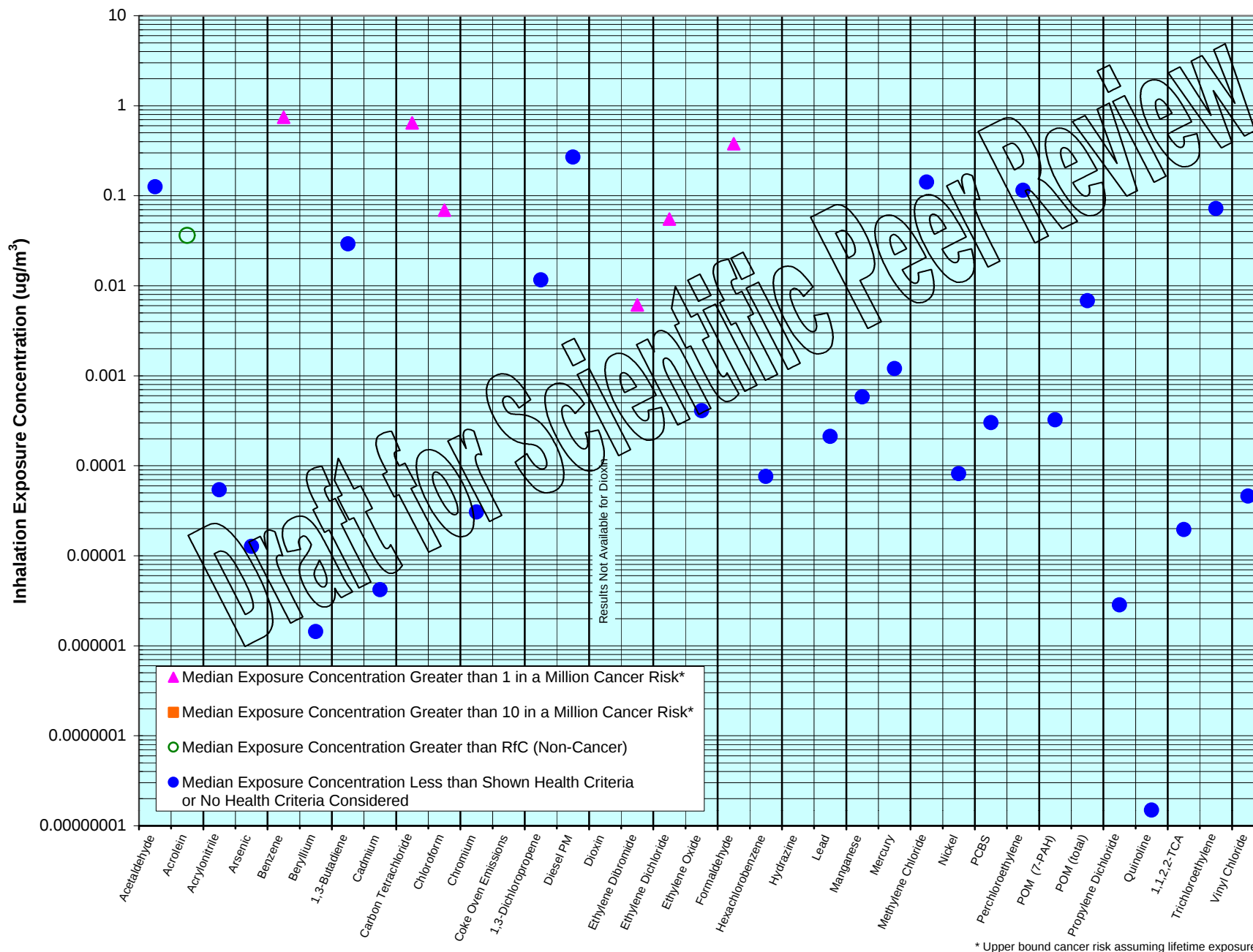


* Upper bound cancer risk assuming lifetime exposure

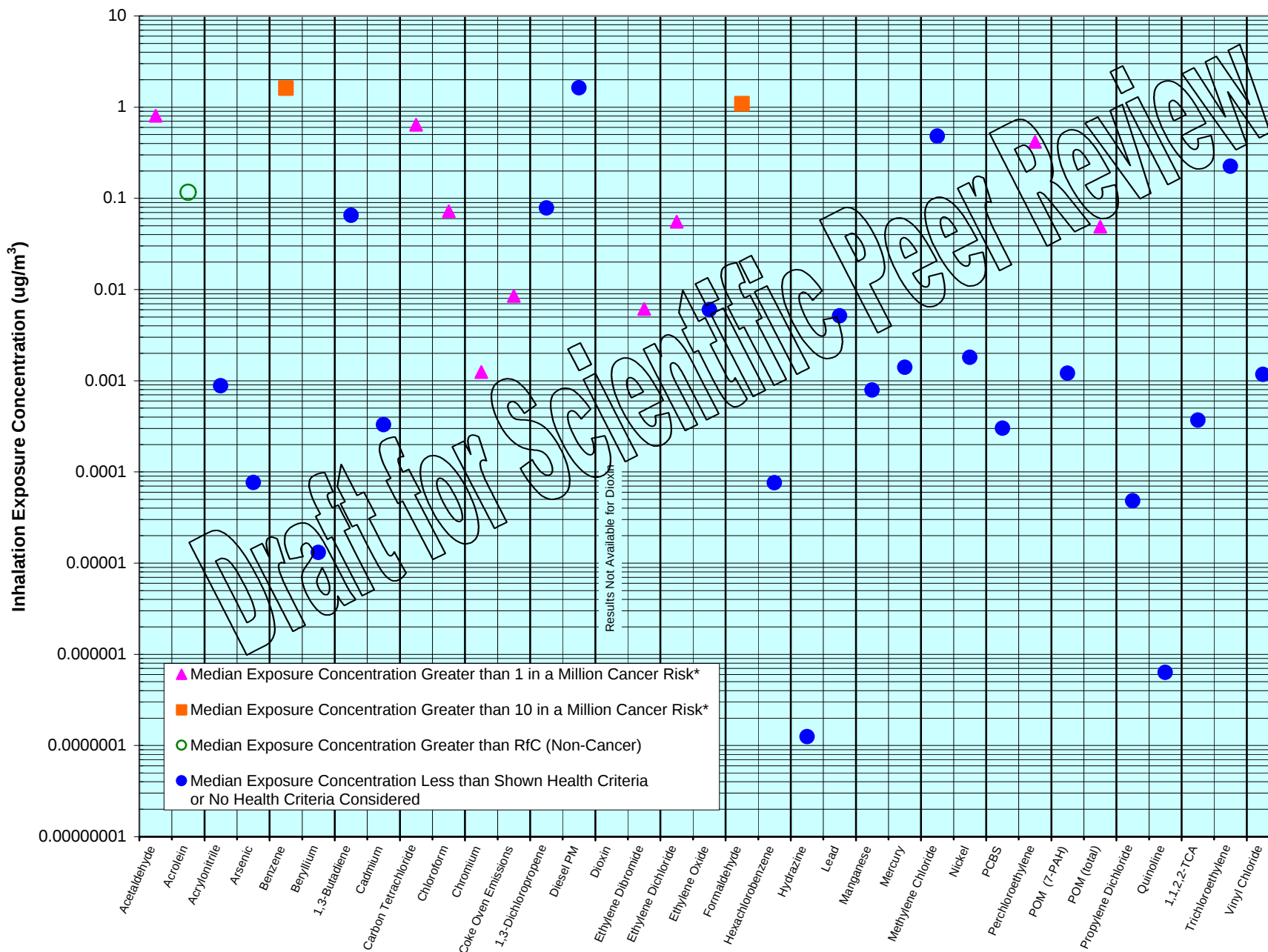
1996 Modeled Median Exposure Concentrations for Georgia (For Limitations On The Use of These Data See Page 2)



1996 Modeled Median Exposure Concentrations for Idaho (For Limitations On The Use of These Data See Page 2)

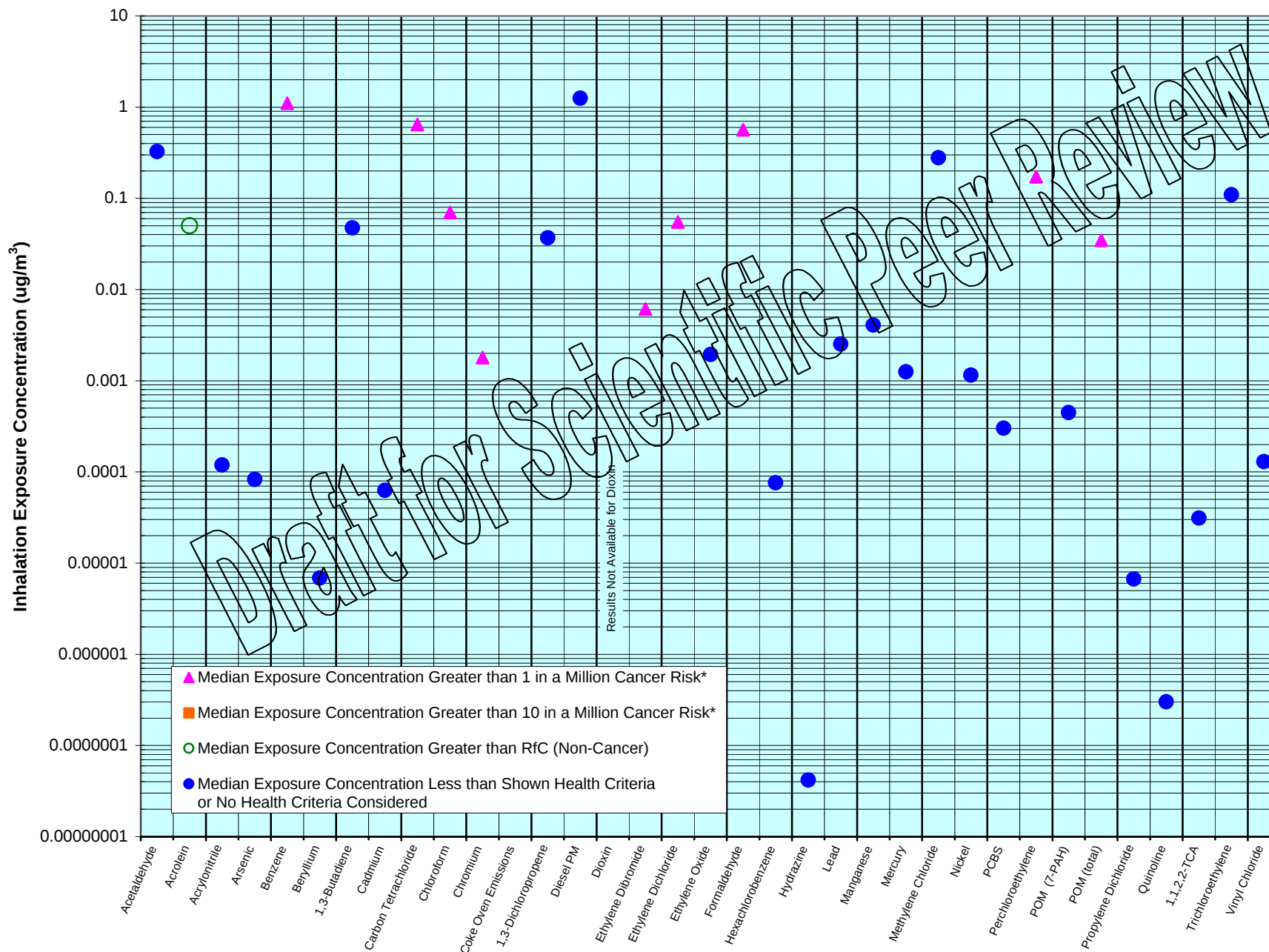


1996 Modeled Median Exposure Concentrations for Illinois (For Limitations On The Use of These Data See Page 2)



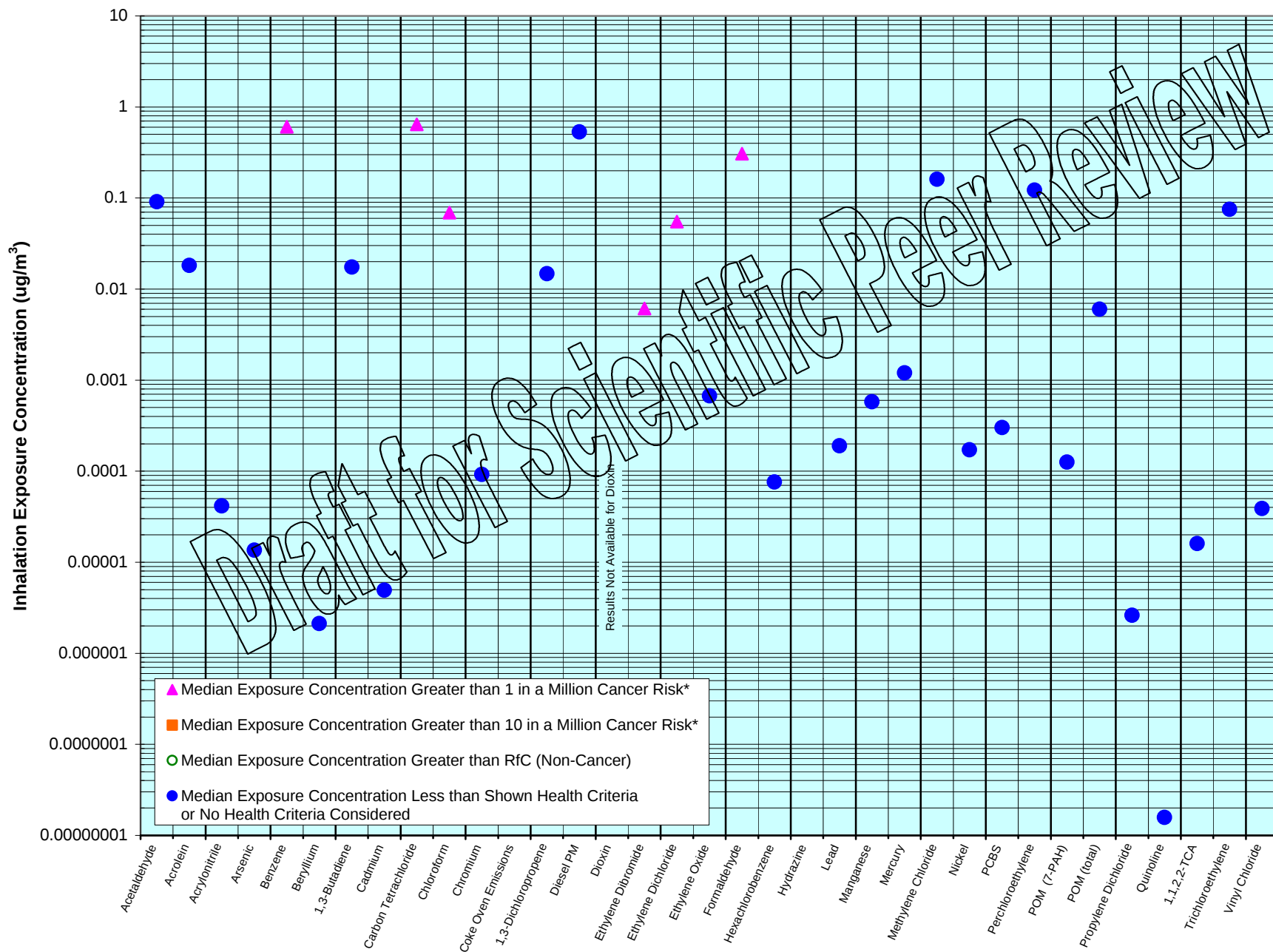
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Indiana (For Limitations On The Use of These Data See Page 2)



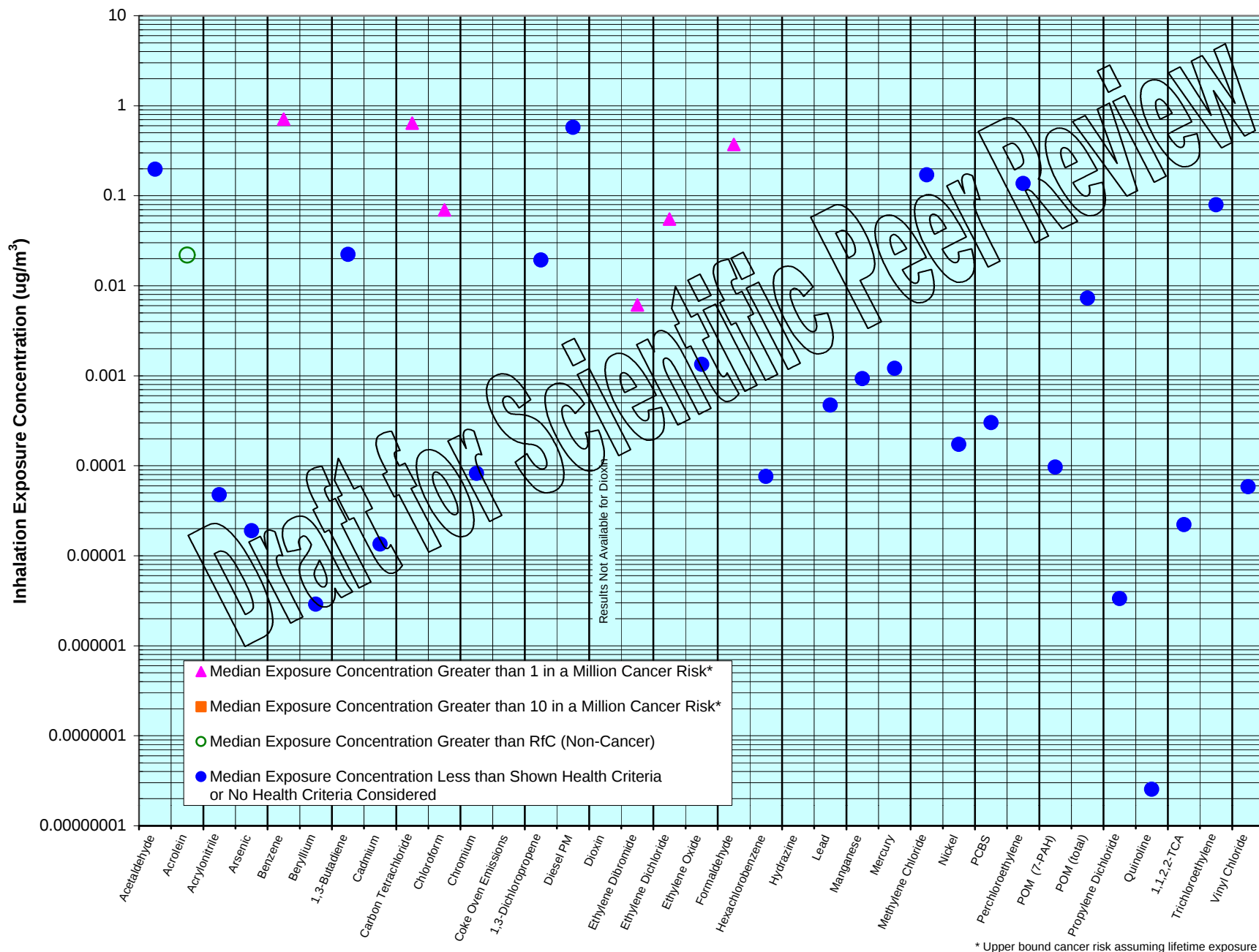
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Iowa
(For Limitations On The Use of These Data See Page 2)



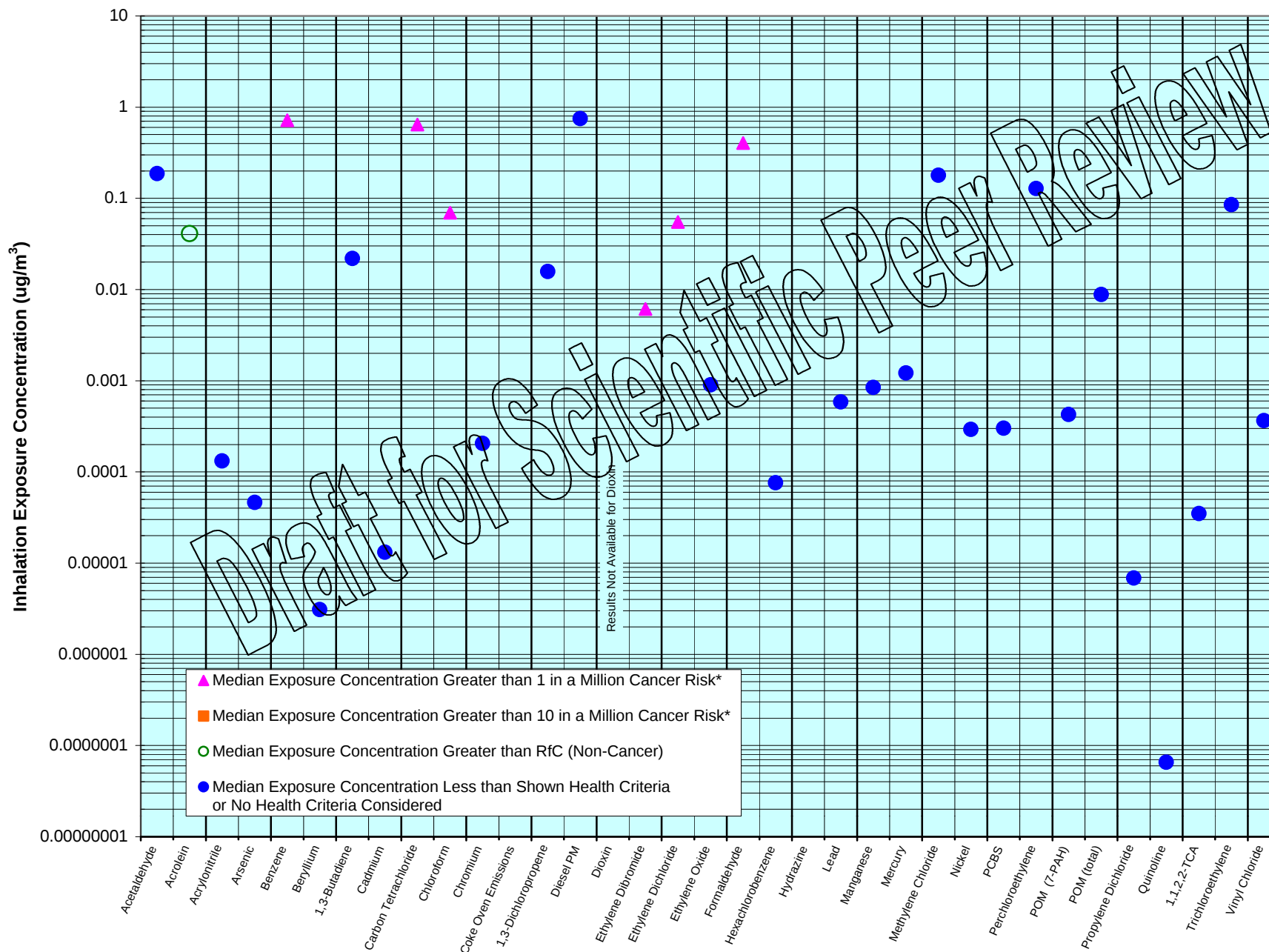
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Kansas (For Limitations On The Use of These Data See Page 2)



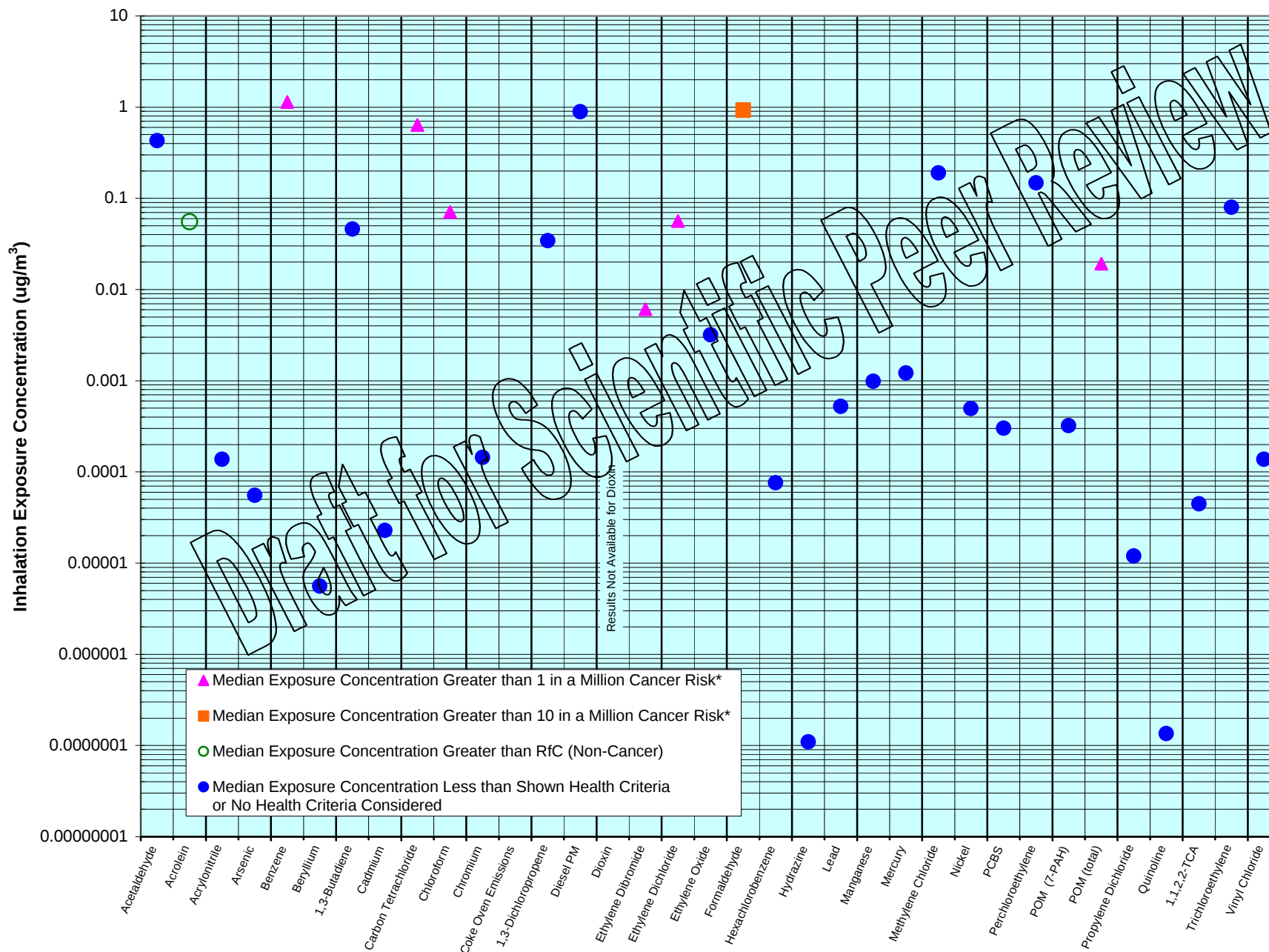
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Kentucky
(For Limitations On The Use of These Data See Page 2)



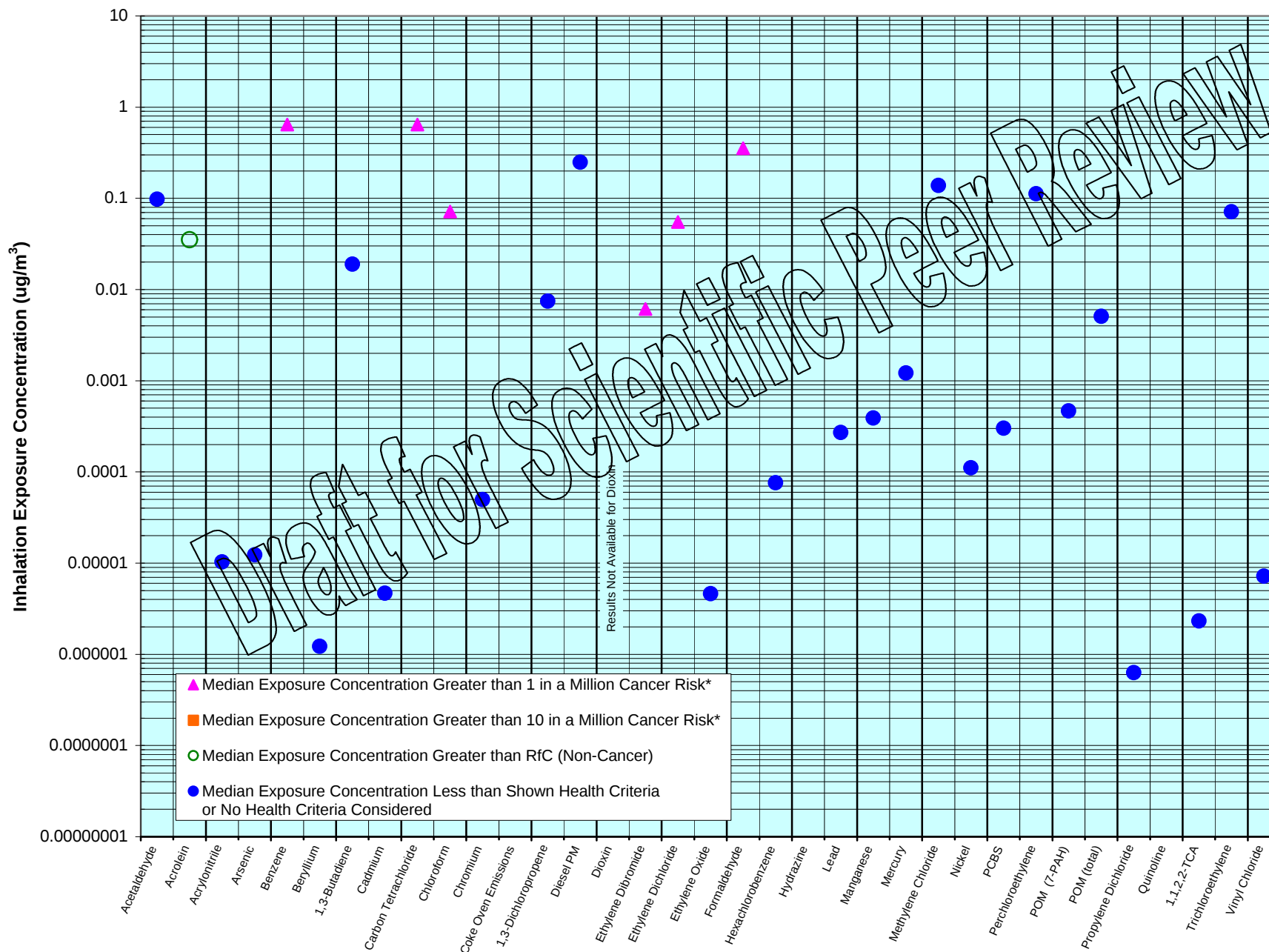
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Louisiana (For Limitations On The Use of These Data See Page 2)



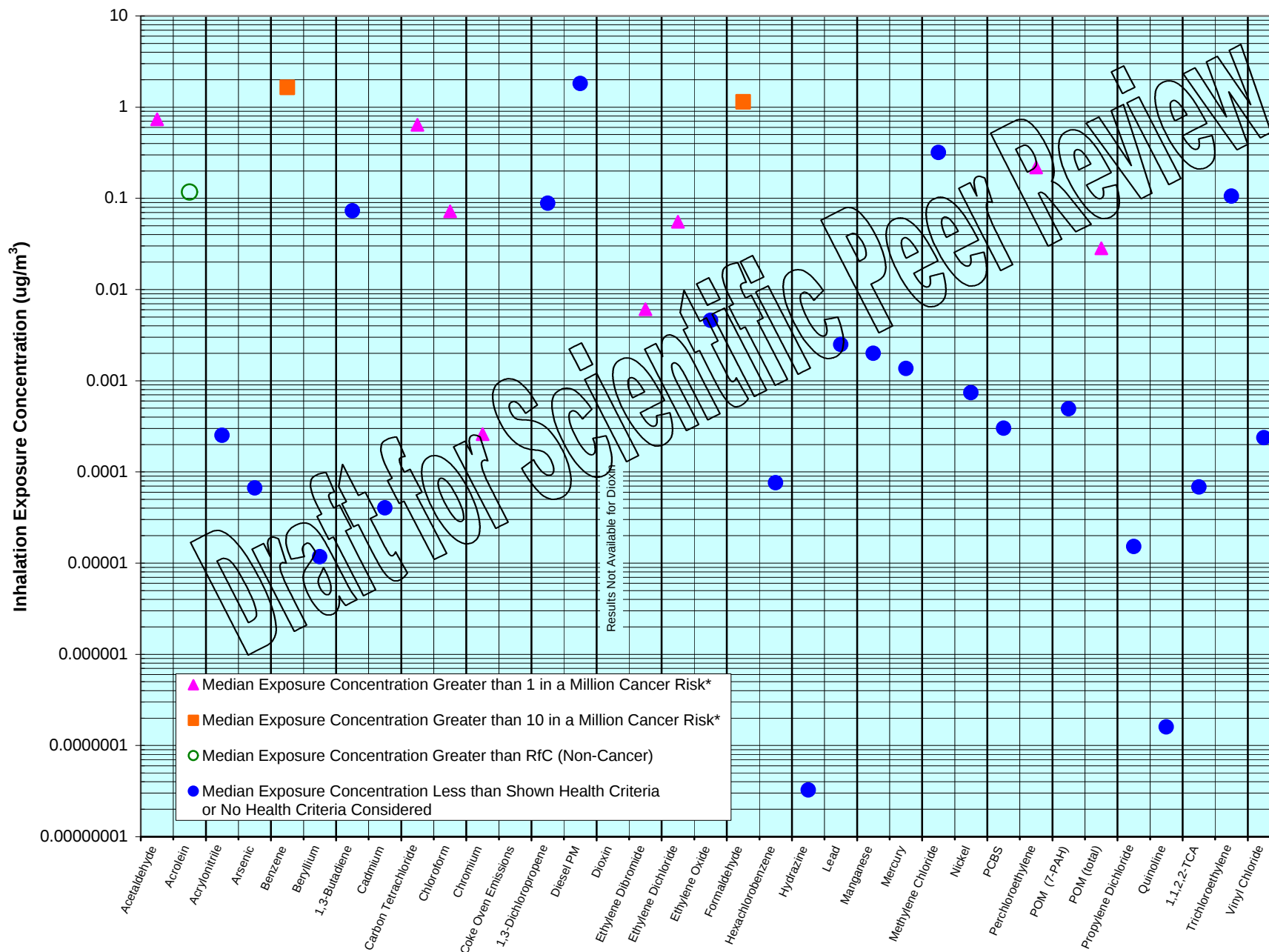
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Maine
(For Limitations On The Use of These Data See Page 2)



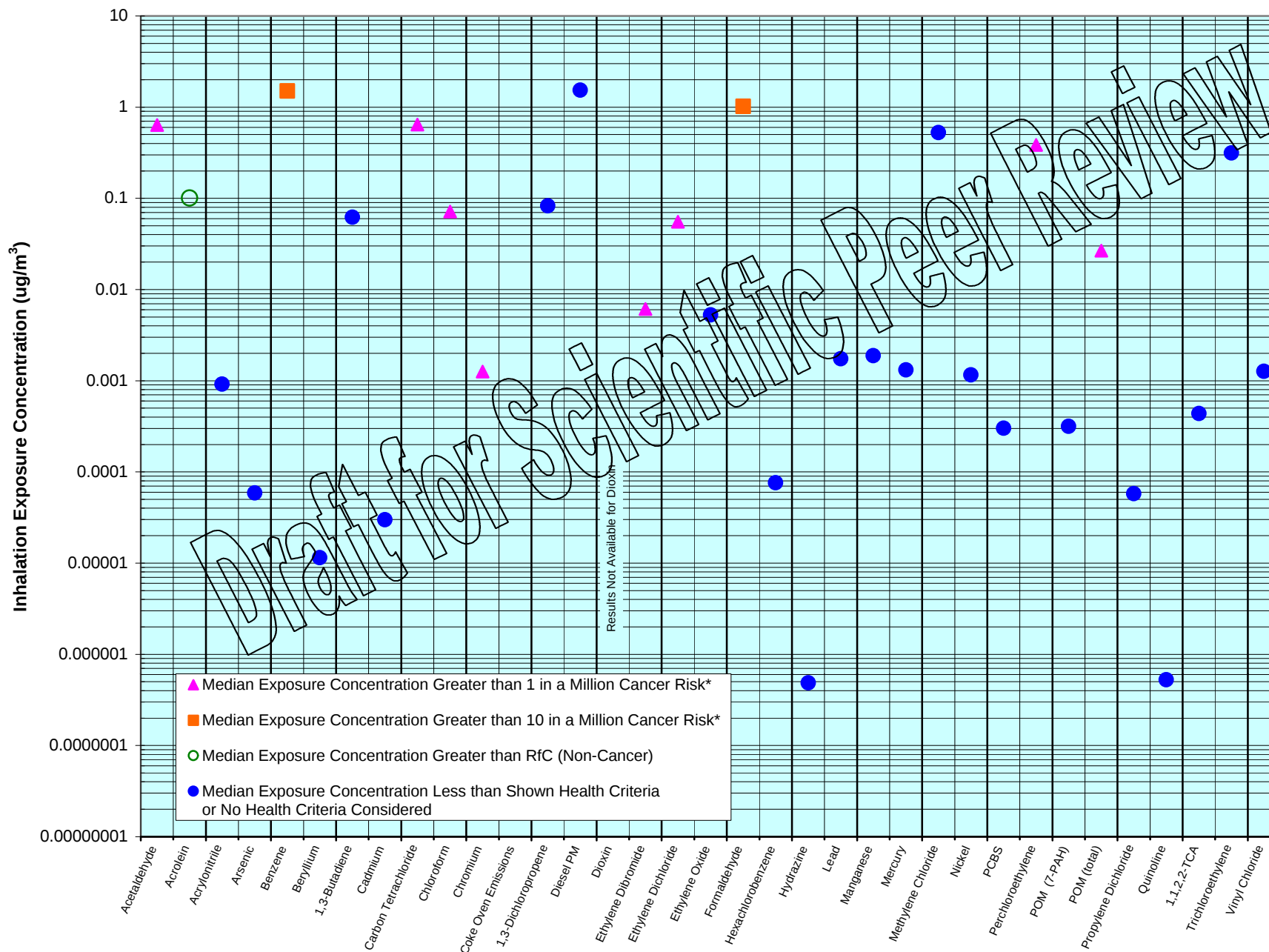
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Maryland (For Limitations On The Use of These Data See Page 2)



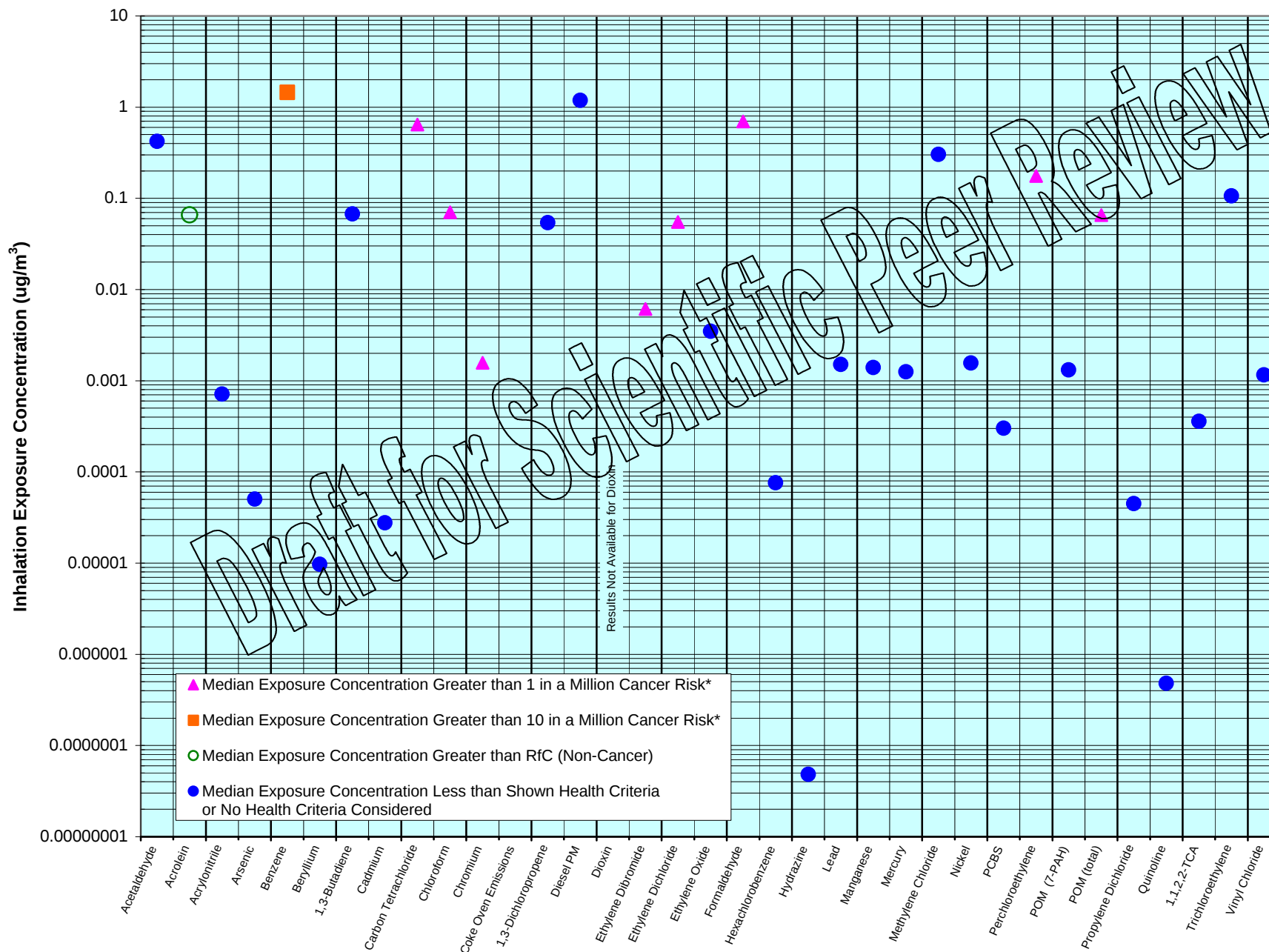
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Massachusetts (For Limitations On The Use of These Data See Page 2)



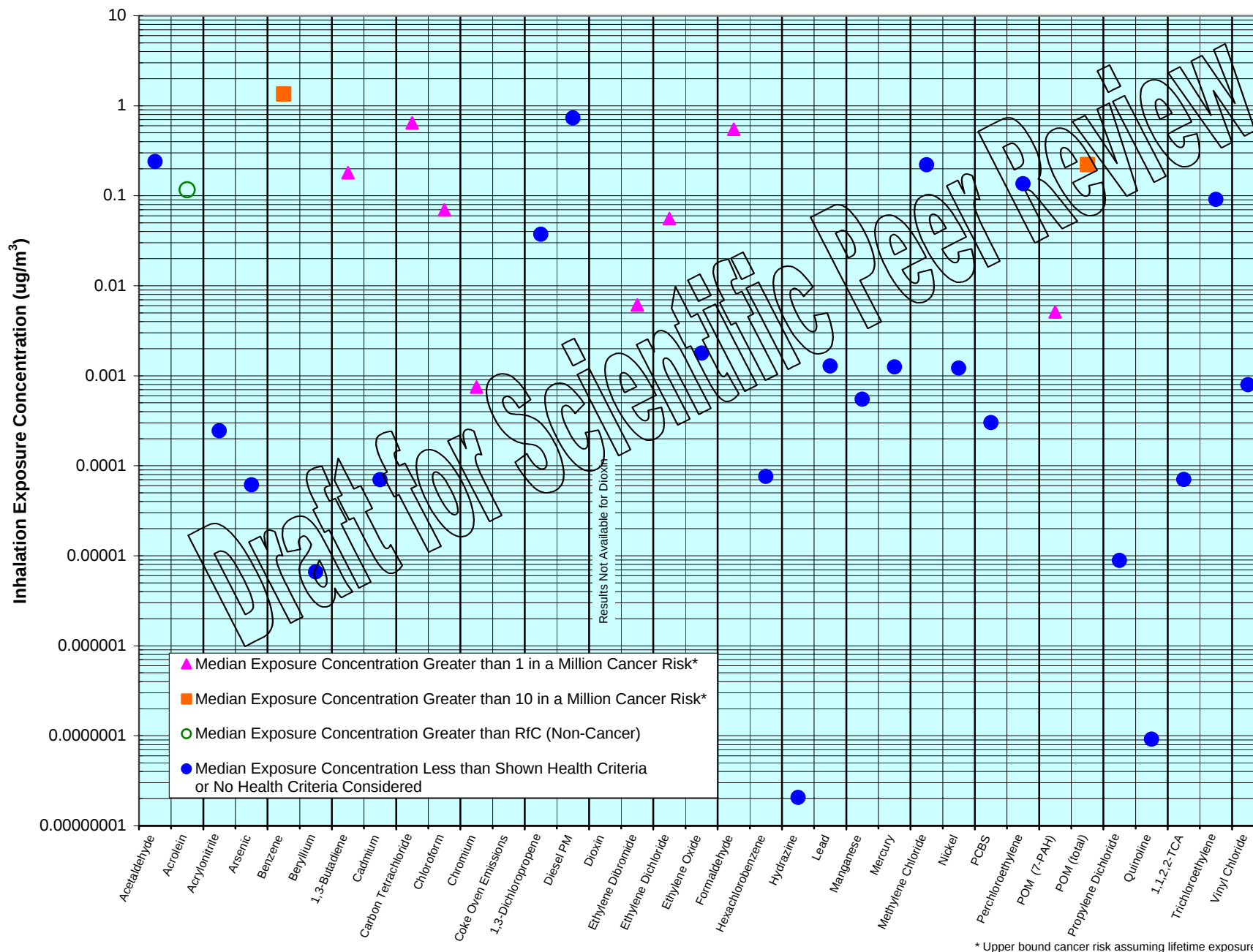
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Michigan (For Limitations On The Use of These Data See Page 2)

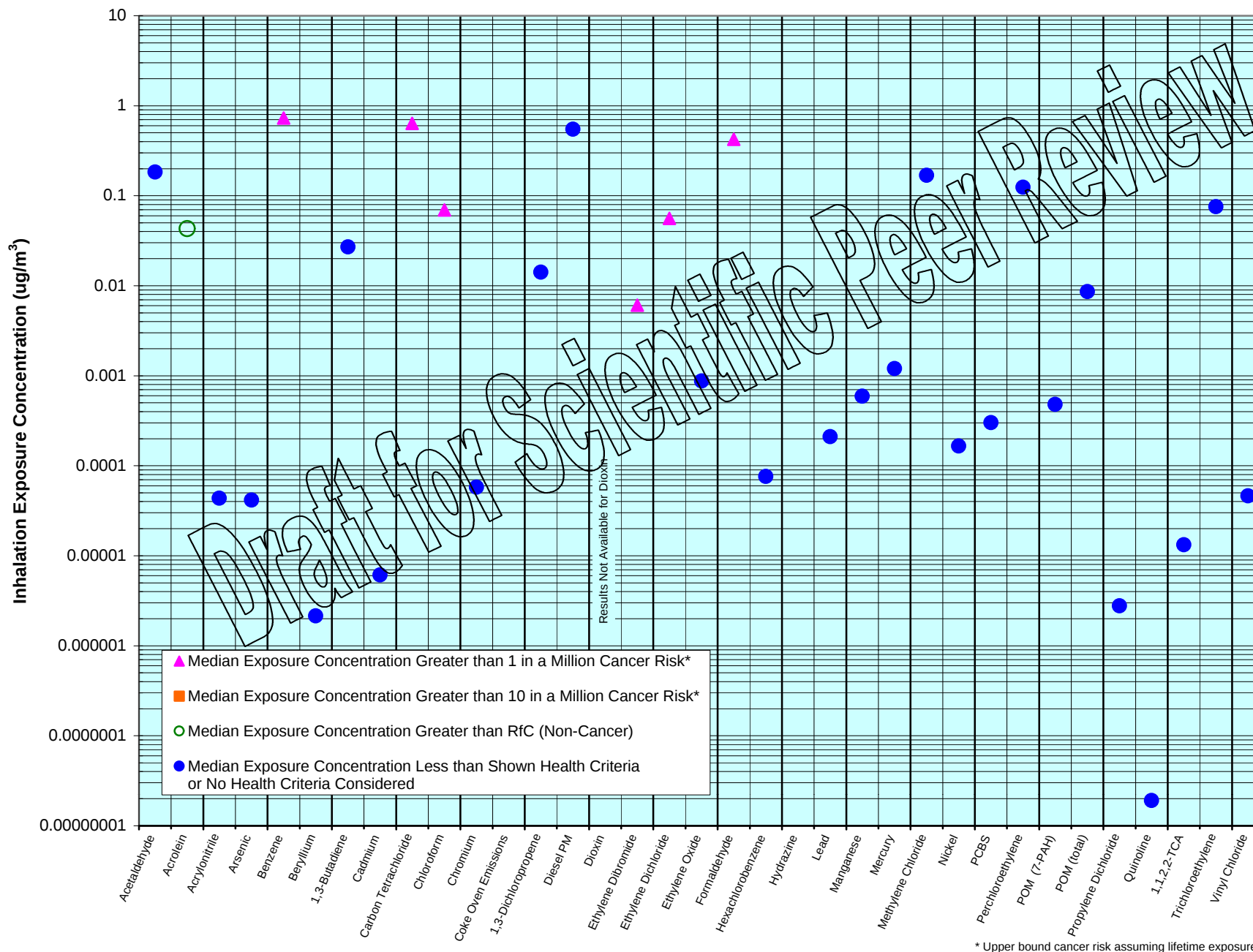


* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Minnesota (For Limitations On The Use of These Data See Page 2)

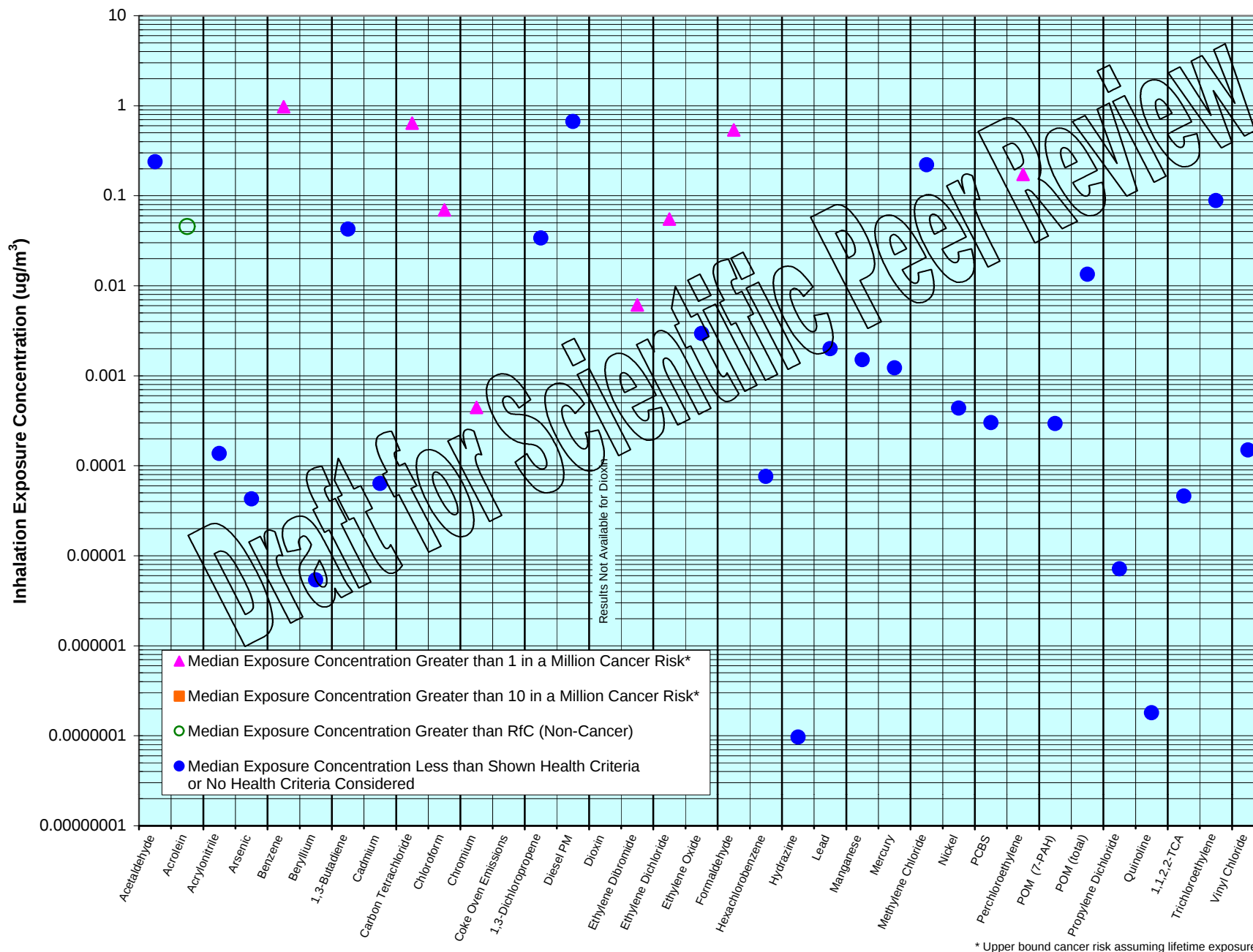


1996 Modeled Median Exposure Concentrations for Mississippi (For Limitations On The Use of These Data See Page 2)



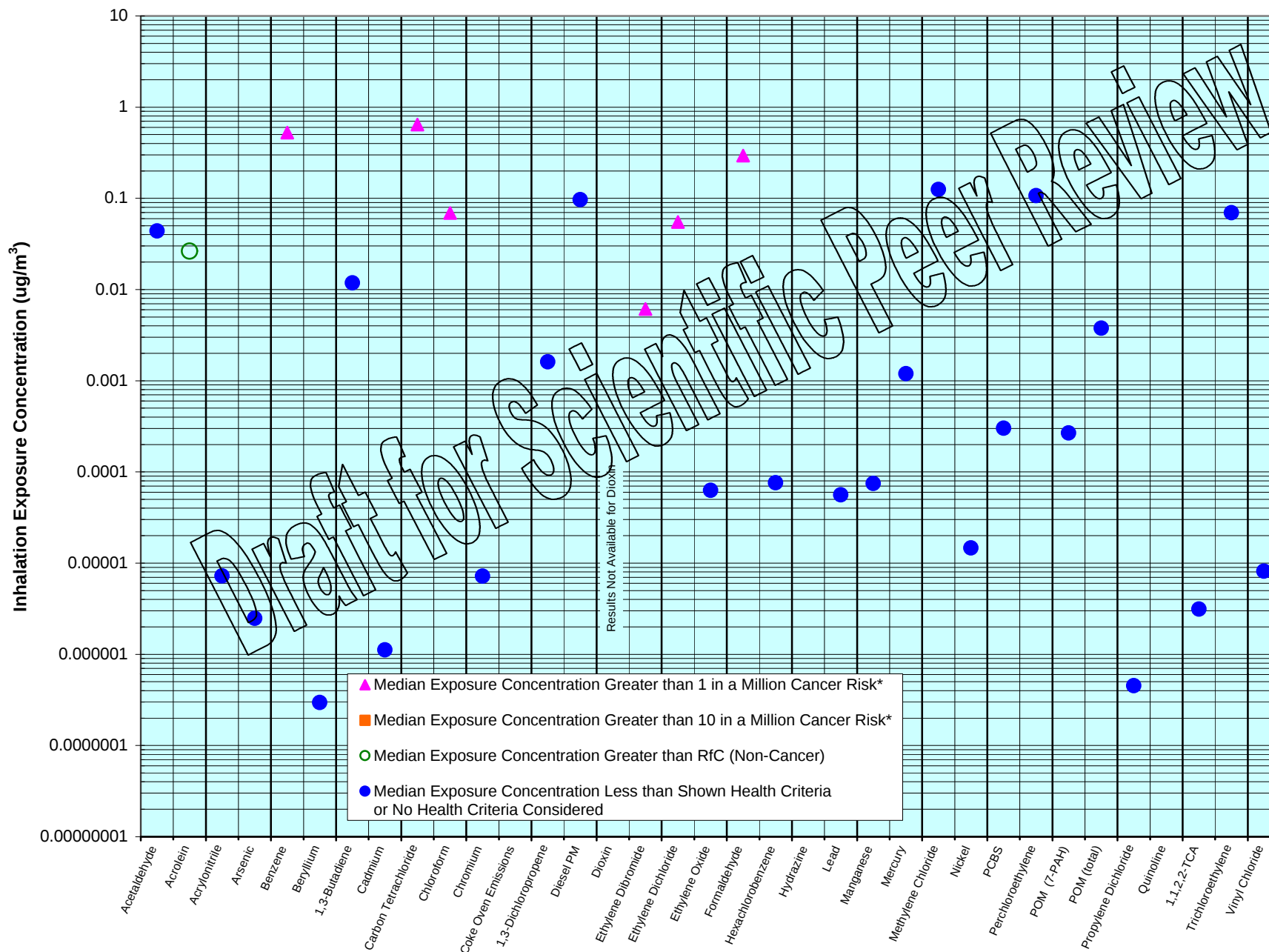
* Upper bound cancer risk assuming lifetime exposure

**1996 Modeled Median Exposure Concentrations for Missouri
(For Limitations On The Use of These Data See Page 2)**



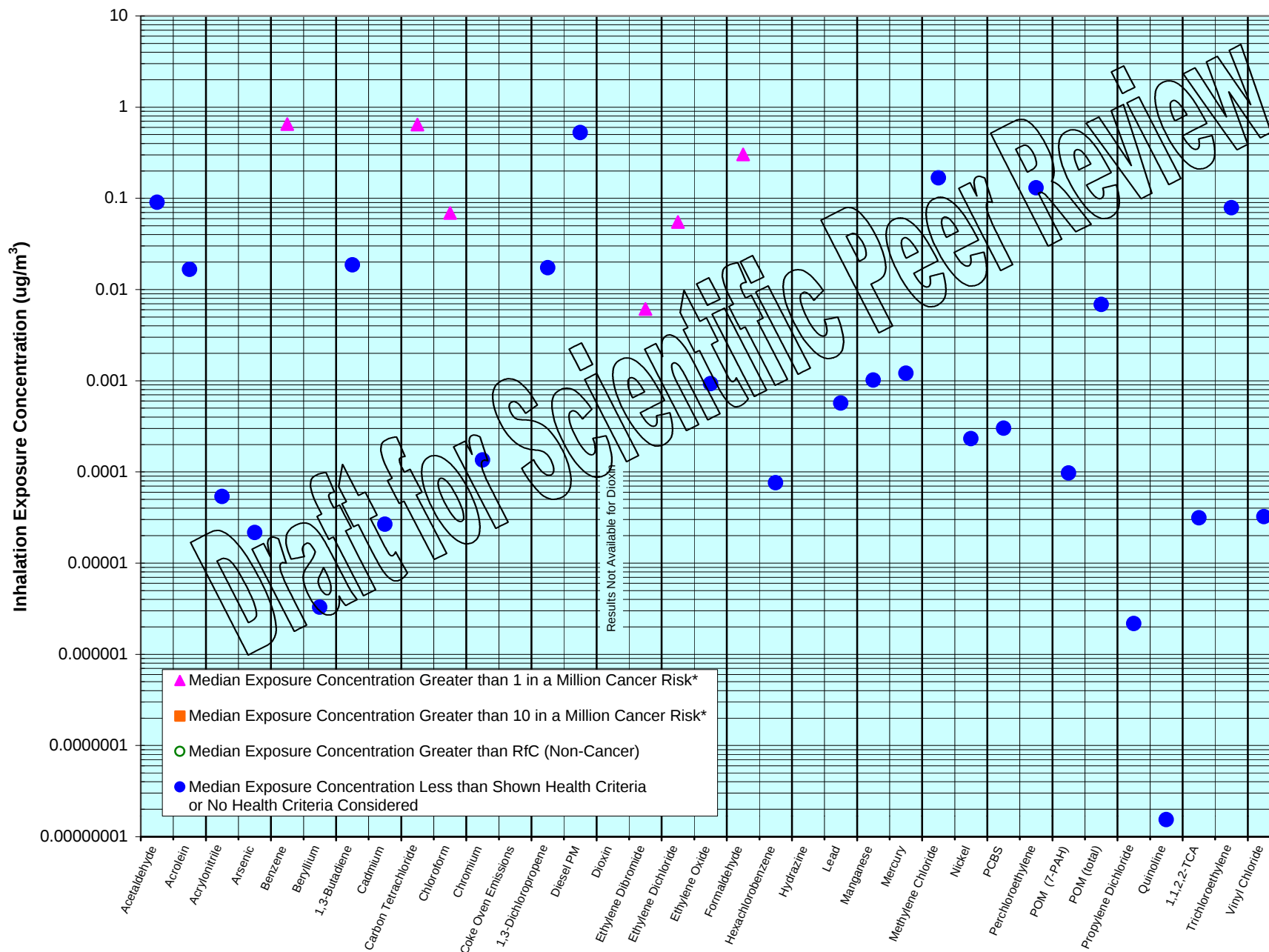
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Montana (For Limitations On The Use of These Data See Page 2)



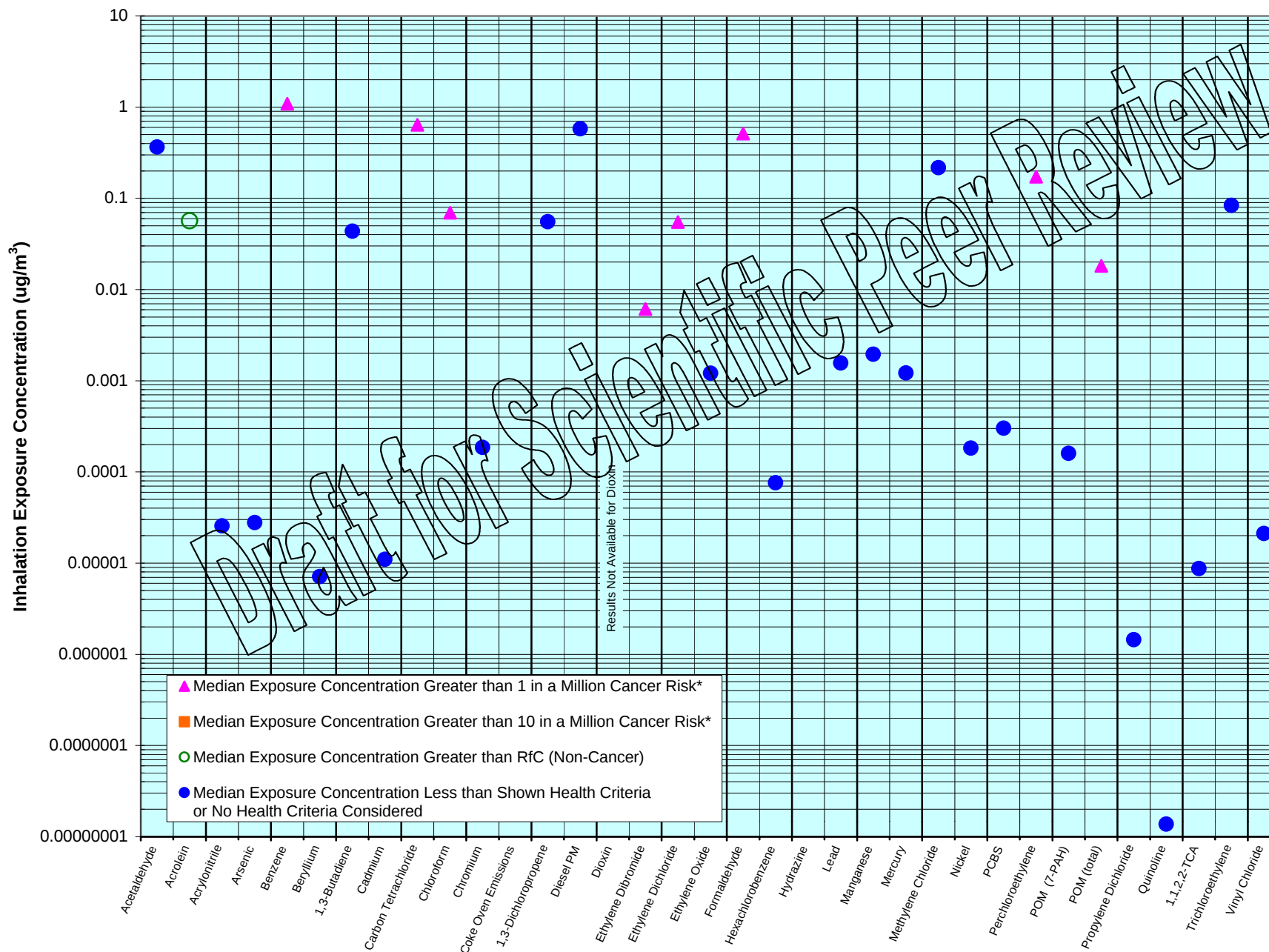
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Nebraska
(For Limitations On The Use of These Data See Page 2)



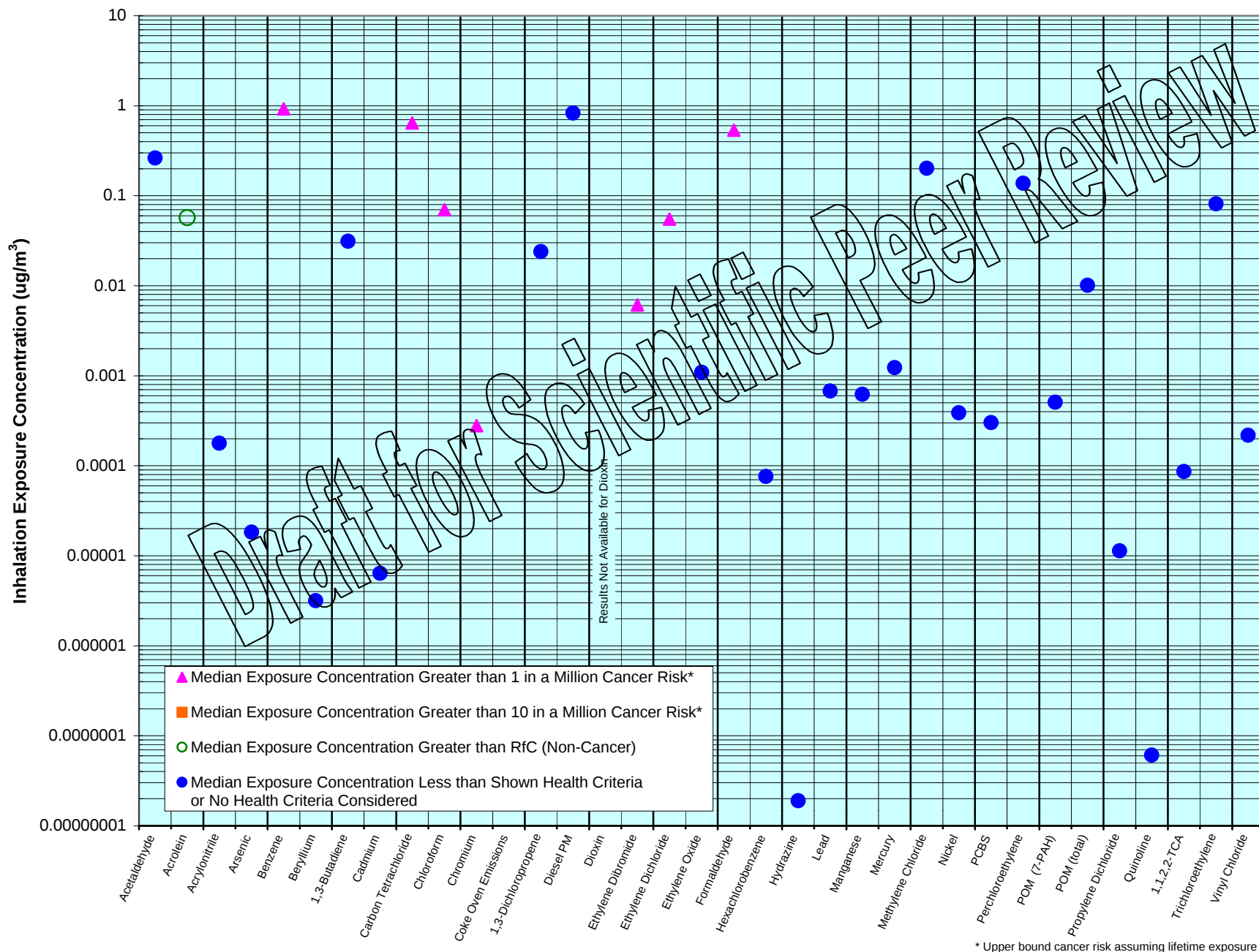
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Nevada (For Limitations On The Use of These Data See Page 2)



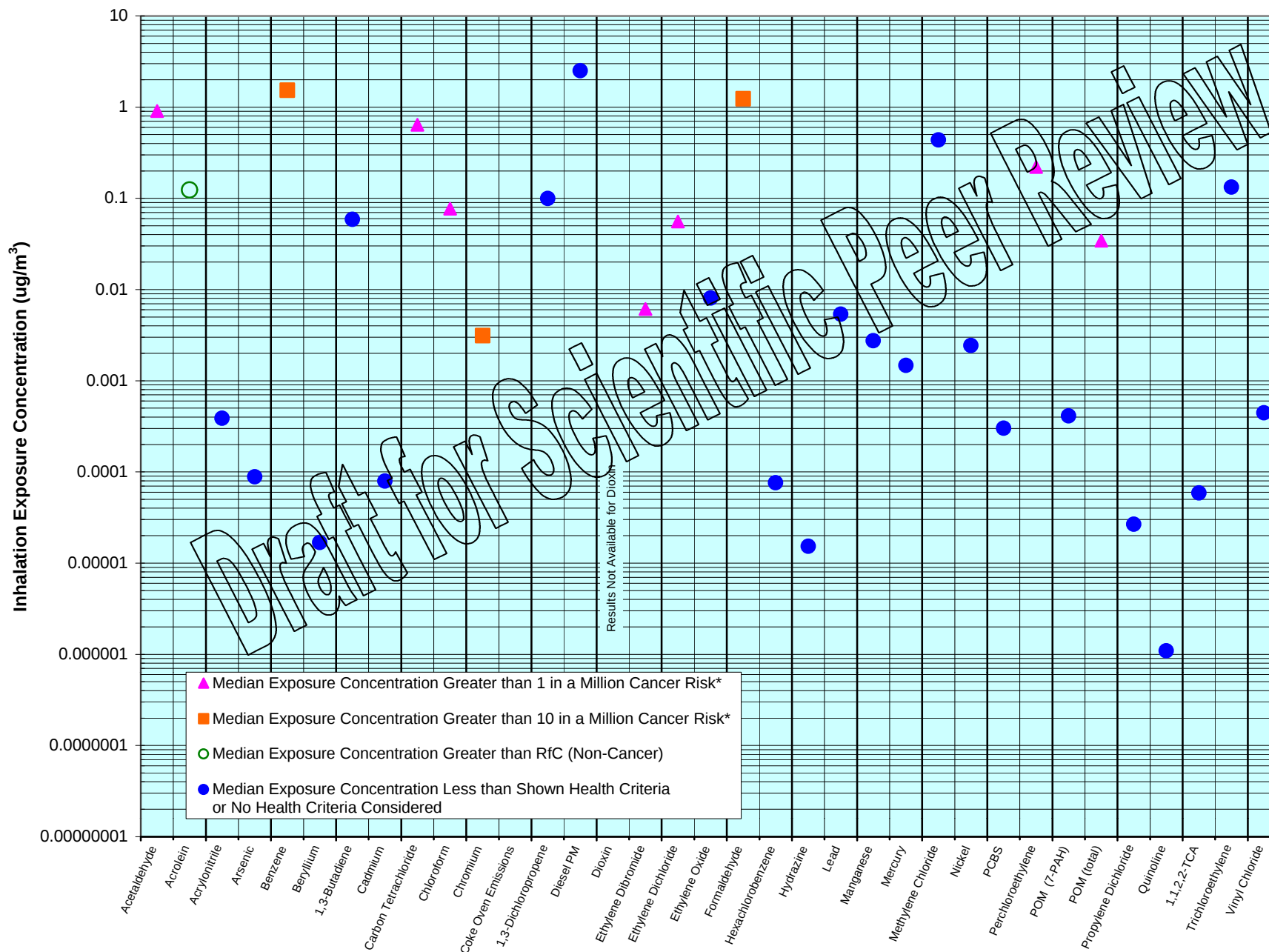
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for New Hampshire
(For Limitations On The Use of These Data See Page 2)



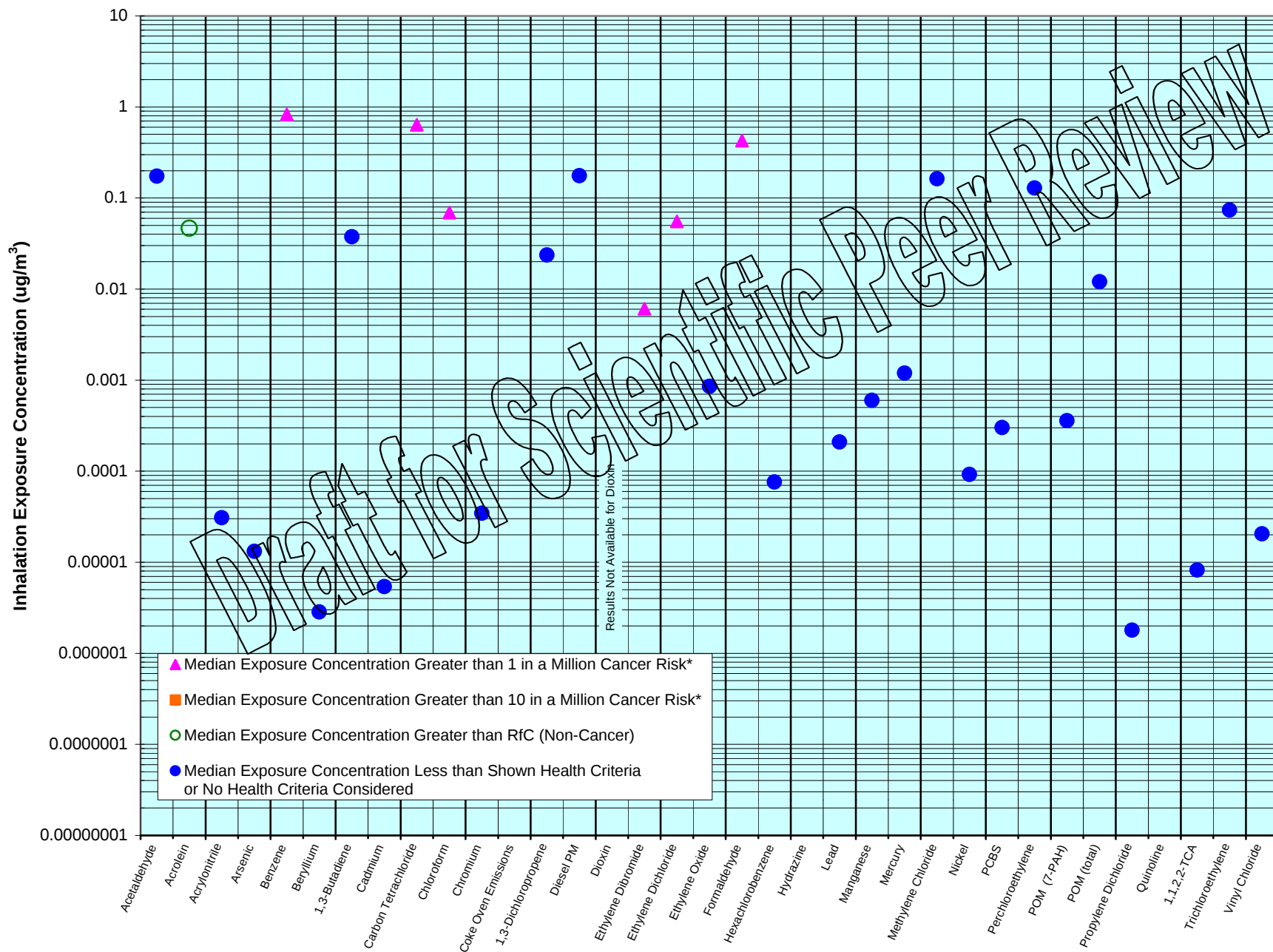
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for New Jersey (For Limitations On The Use of These Data See Page 2)



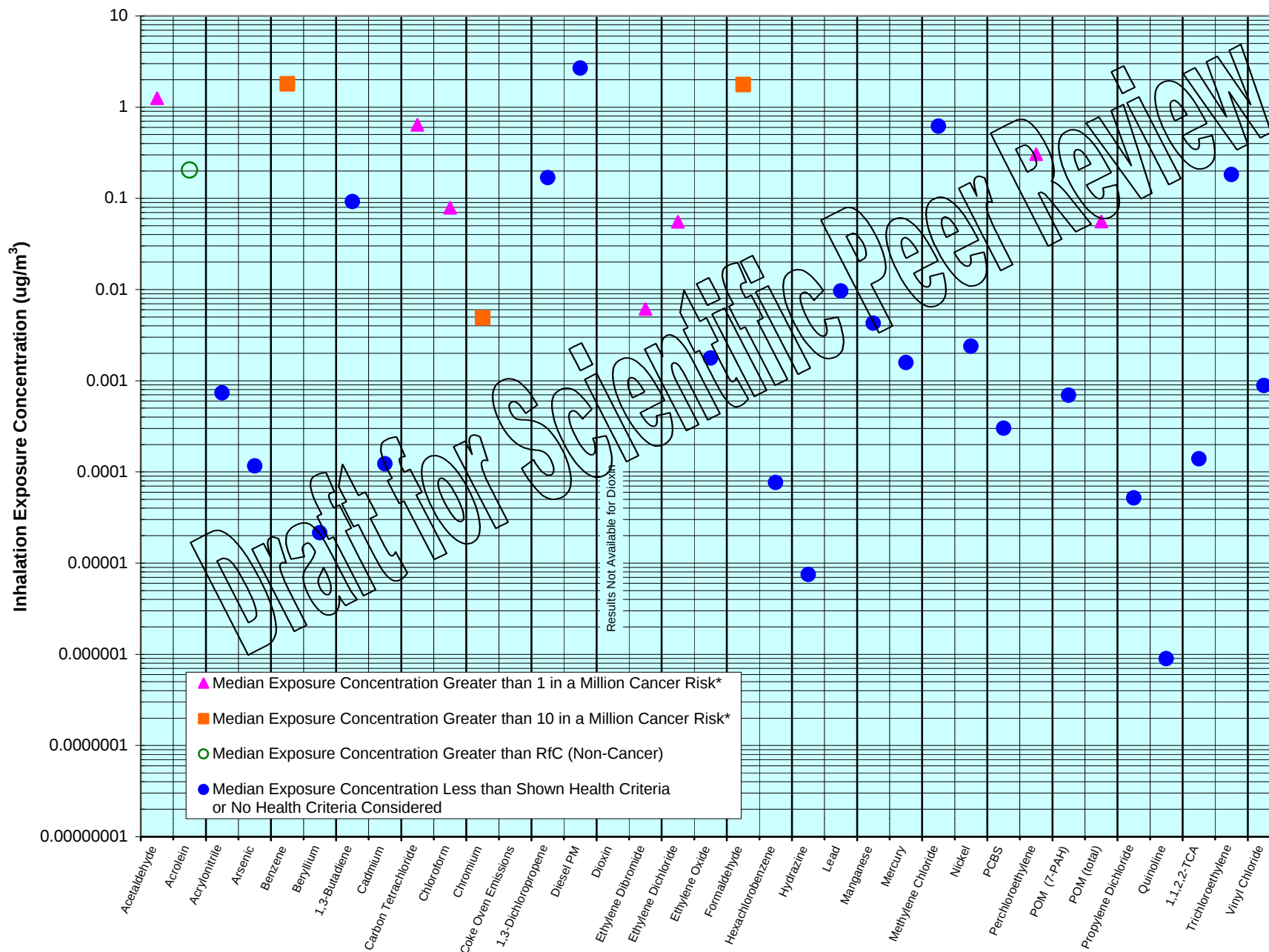
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for New Mexico (For Limitations On The Use of These Data See Page 2)



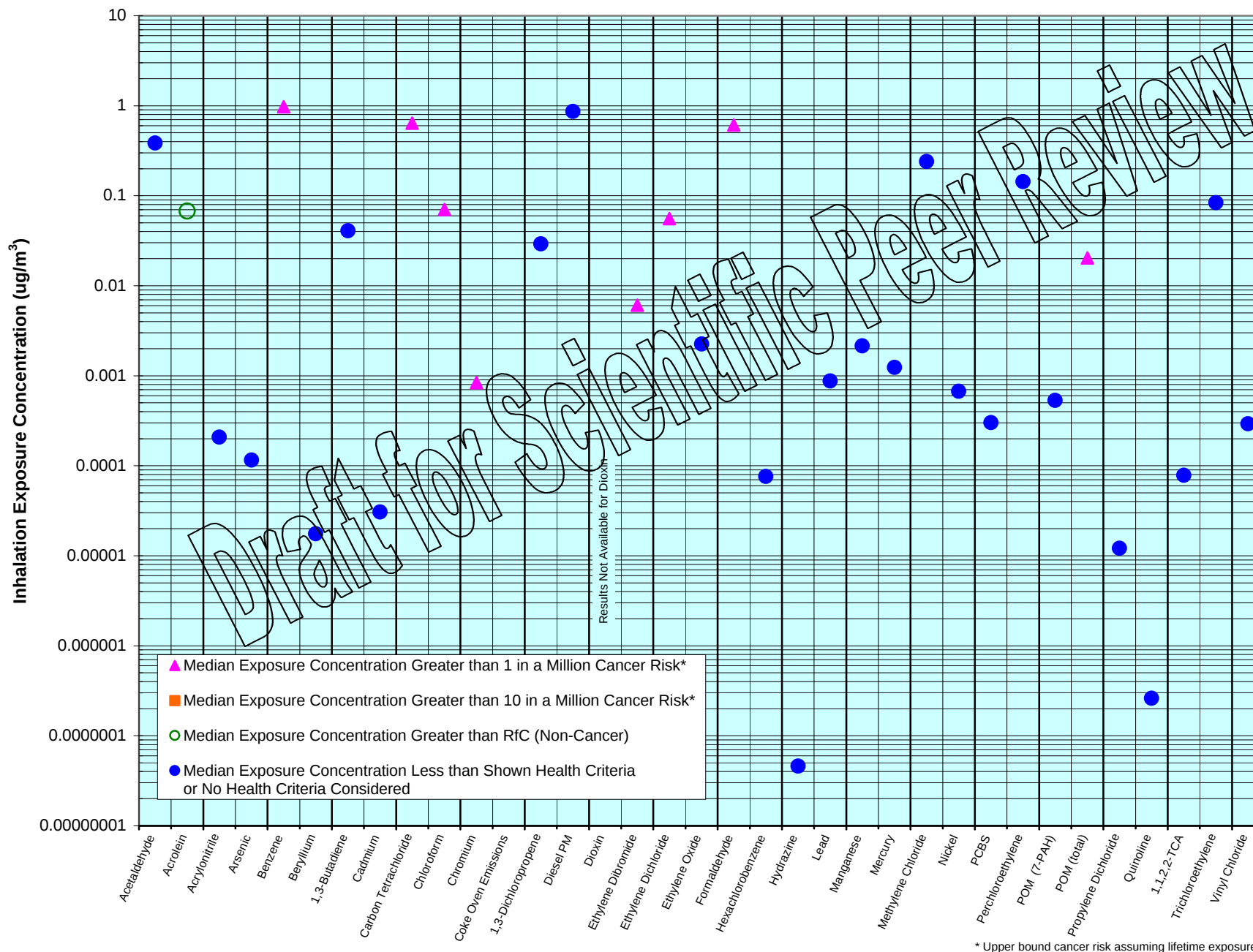
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for New York
(For Limitations On The Use of These Data See Page 2)



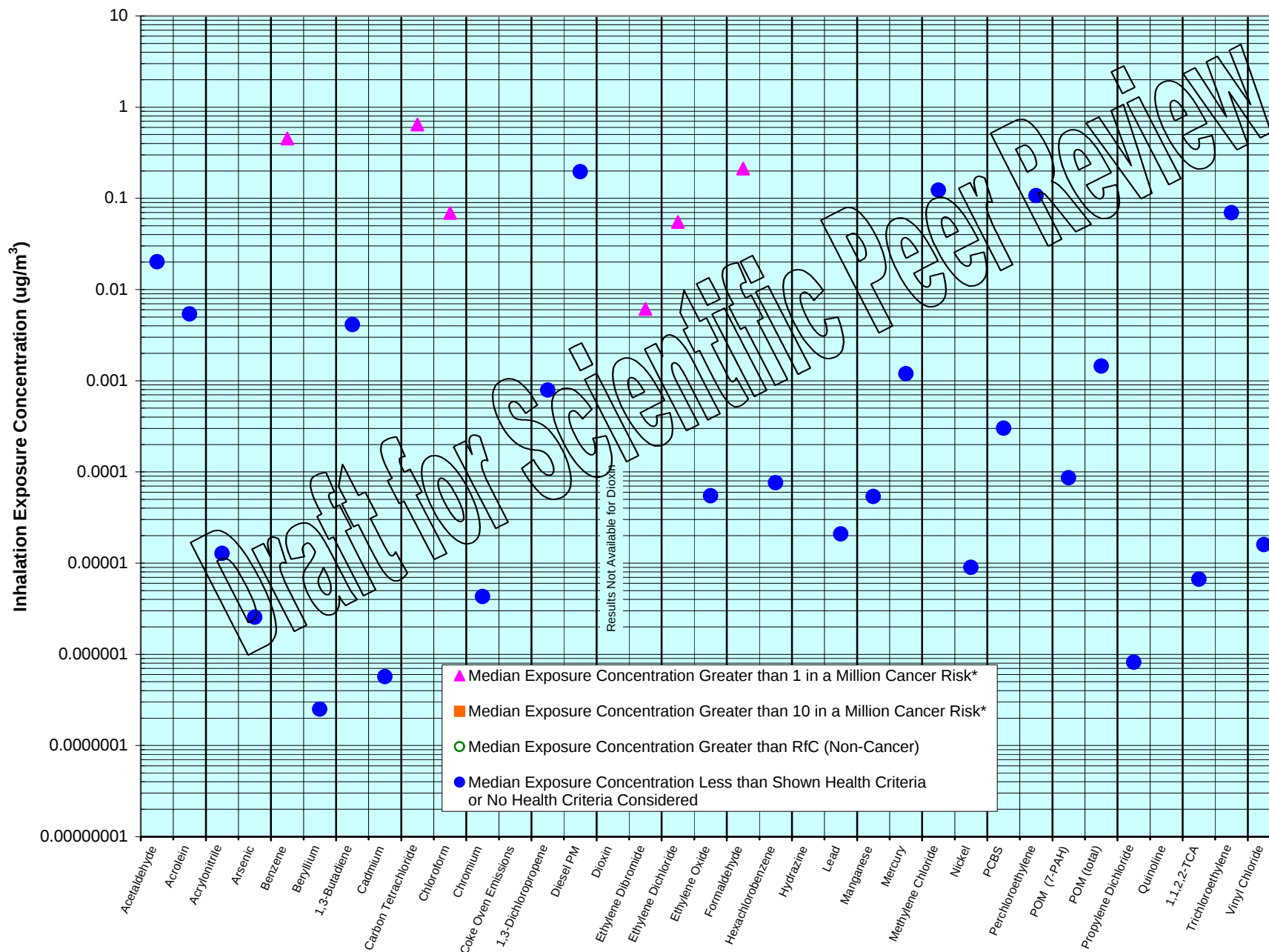
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for North Carolina (For Limitations On The Use of These Data See Page 2)



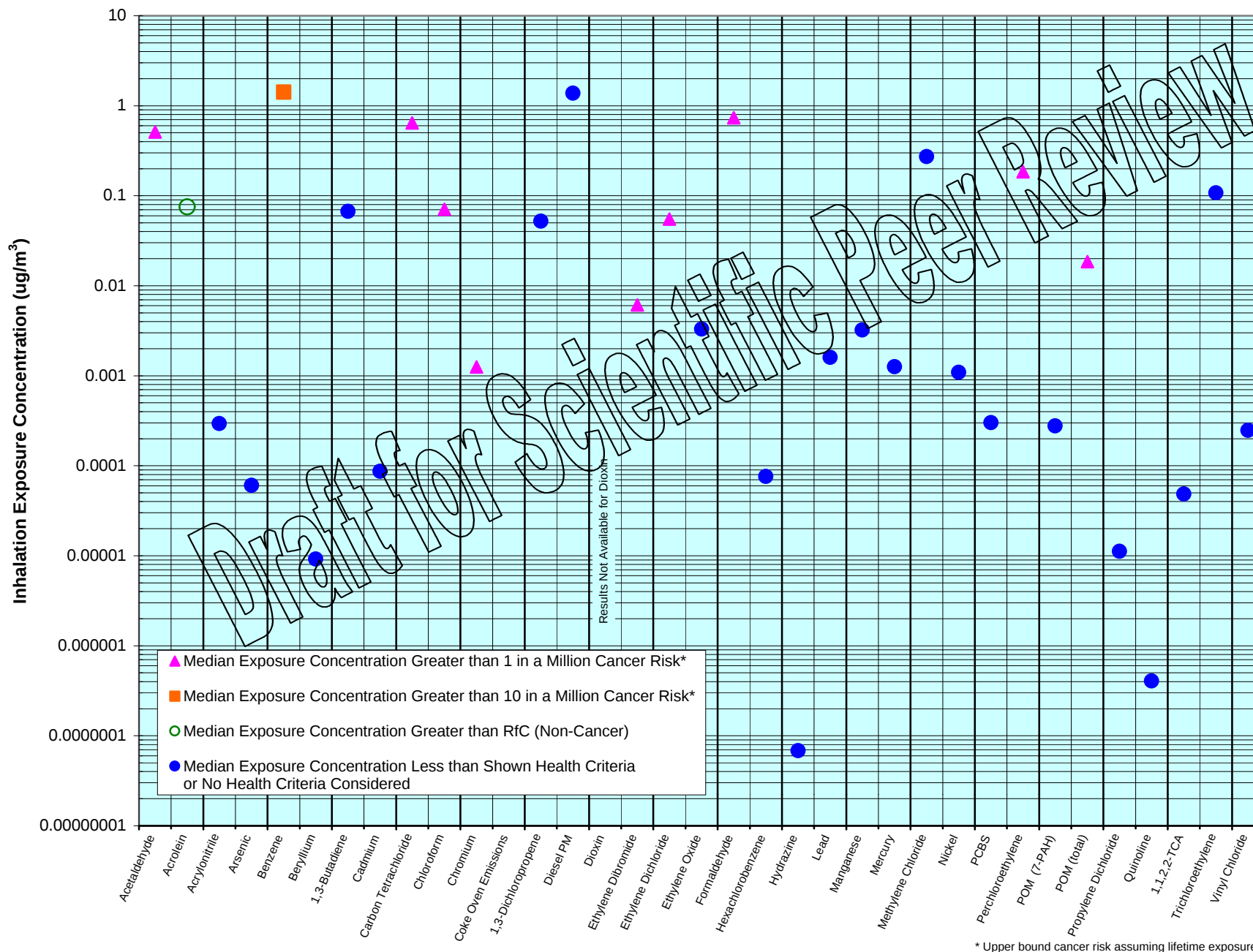
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for North Dakota (For Limitations On The Use of These Data See Page 2)



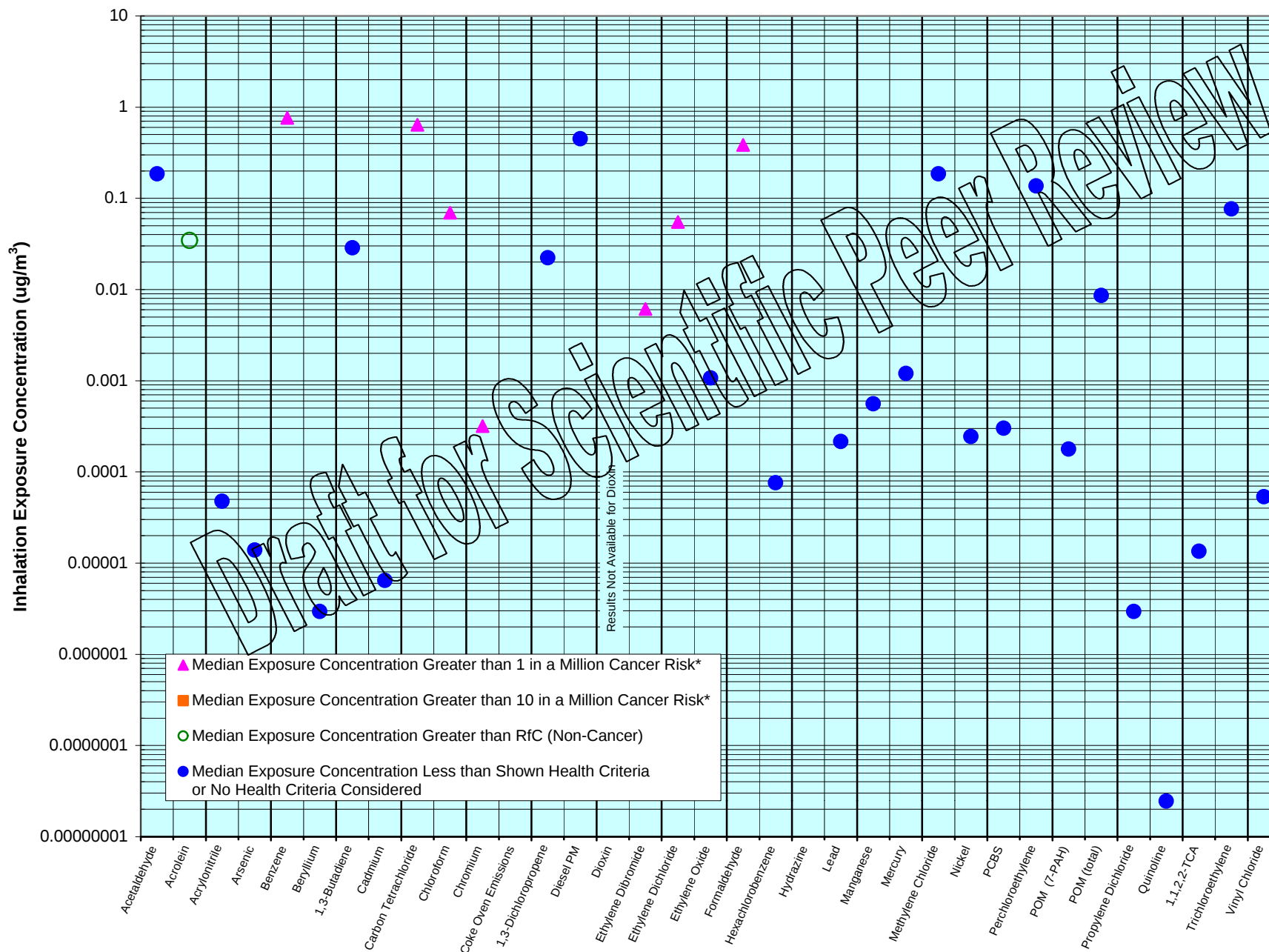
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Ohio (For Limitations On The Use of These Data See Page 2)



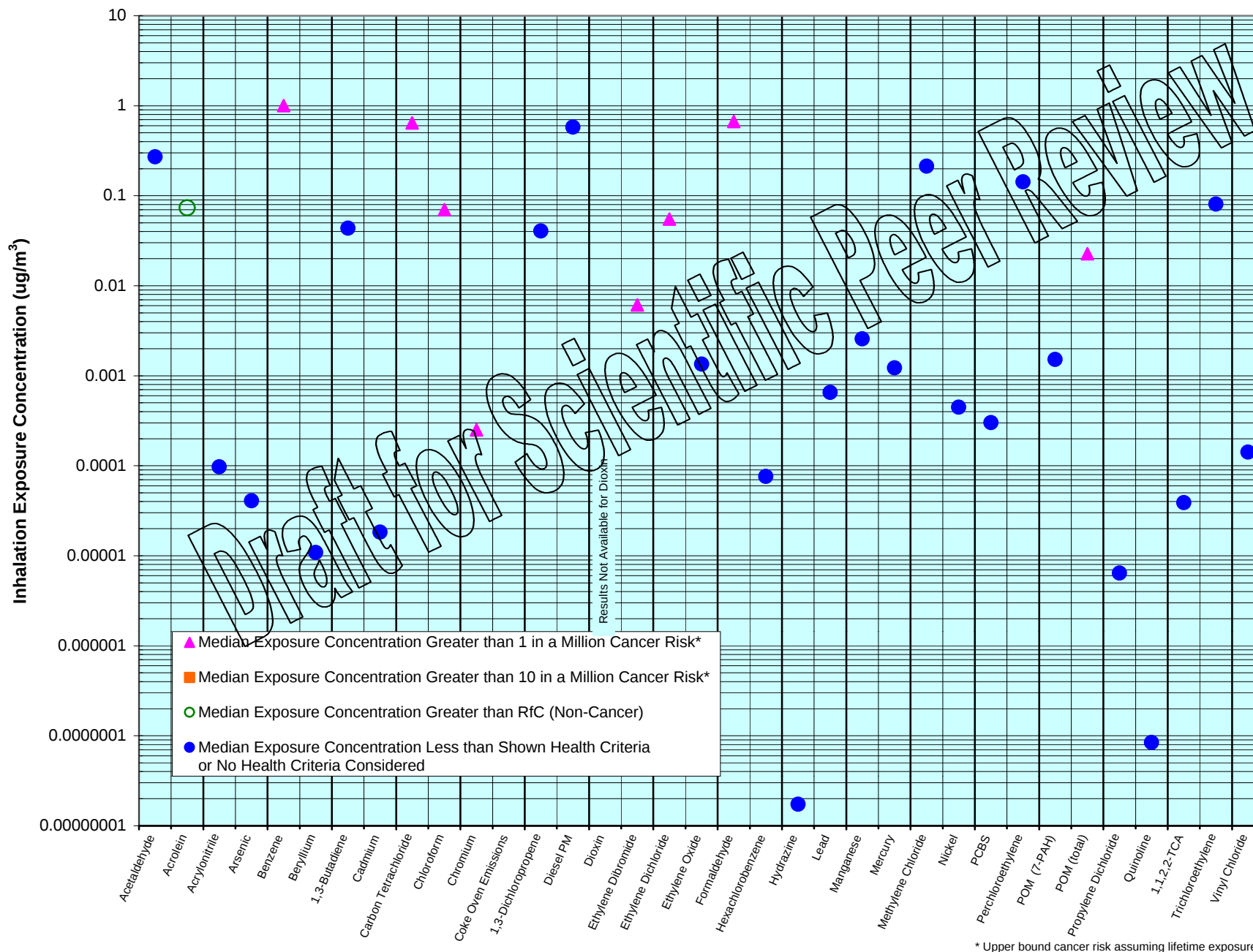
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Oklahoma (For Limitations On The Use of These Data See Page 2)



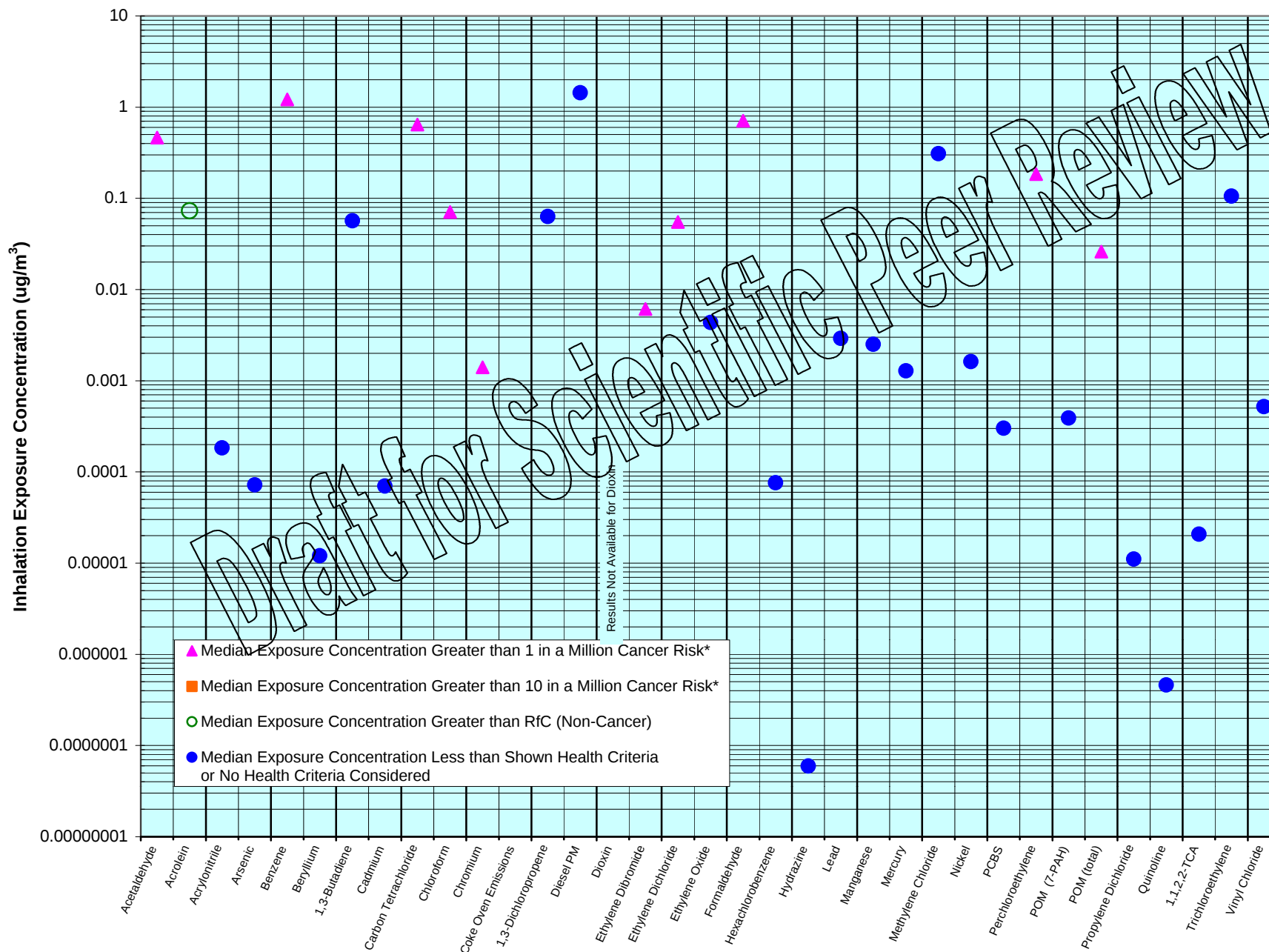
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Oregon (For Limitations On The Use of These Data See Page 2)



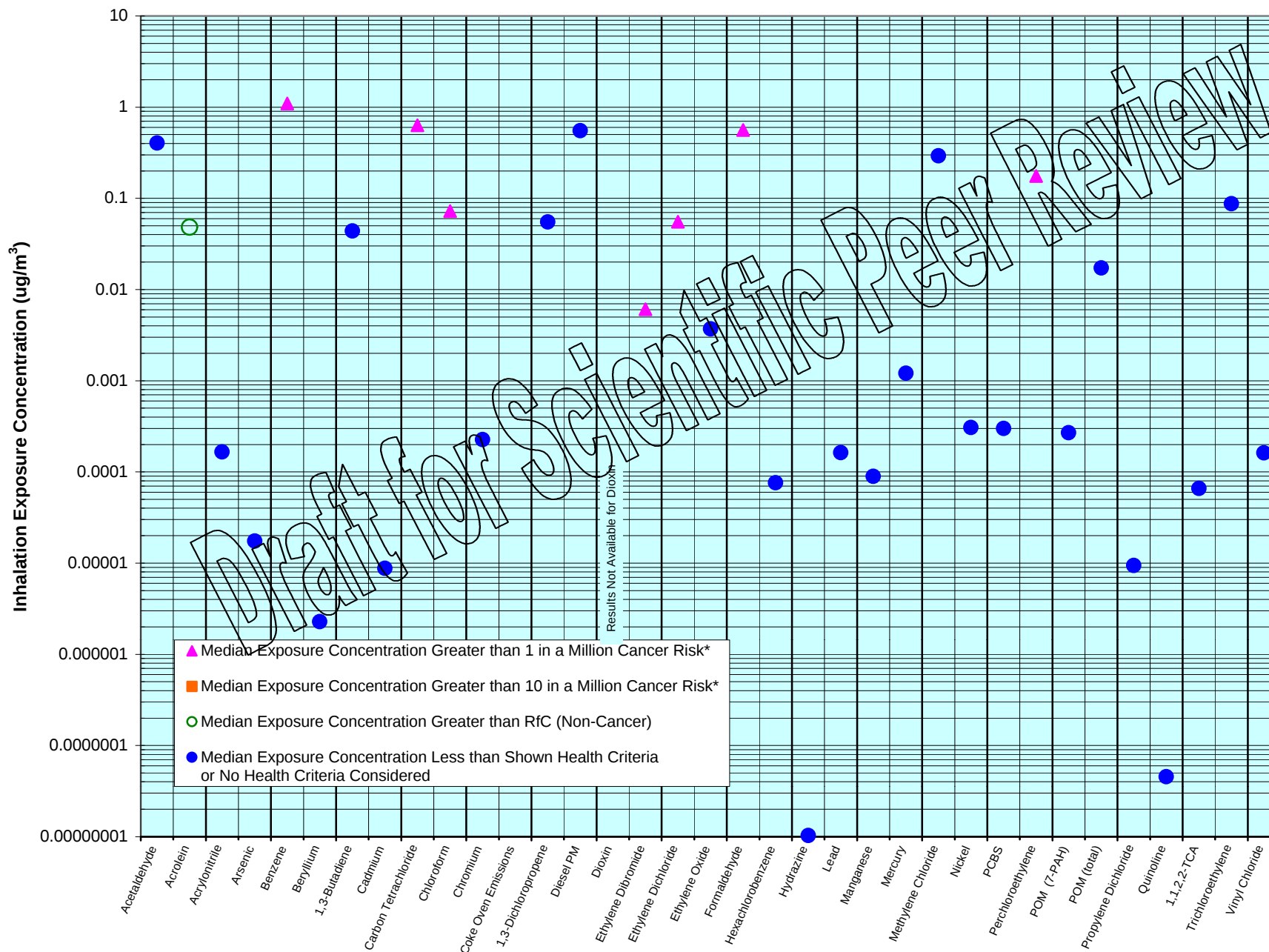
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Pennsylvania (For Limitations On The Use of These Data See Page 2)



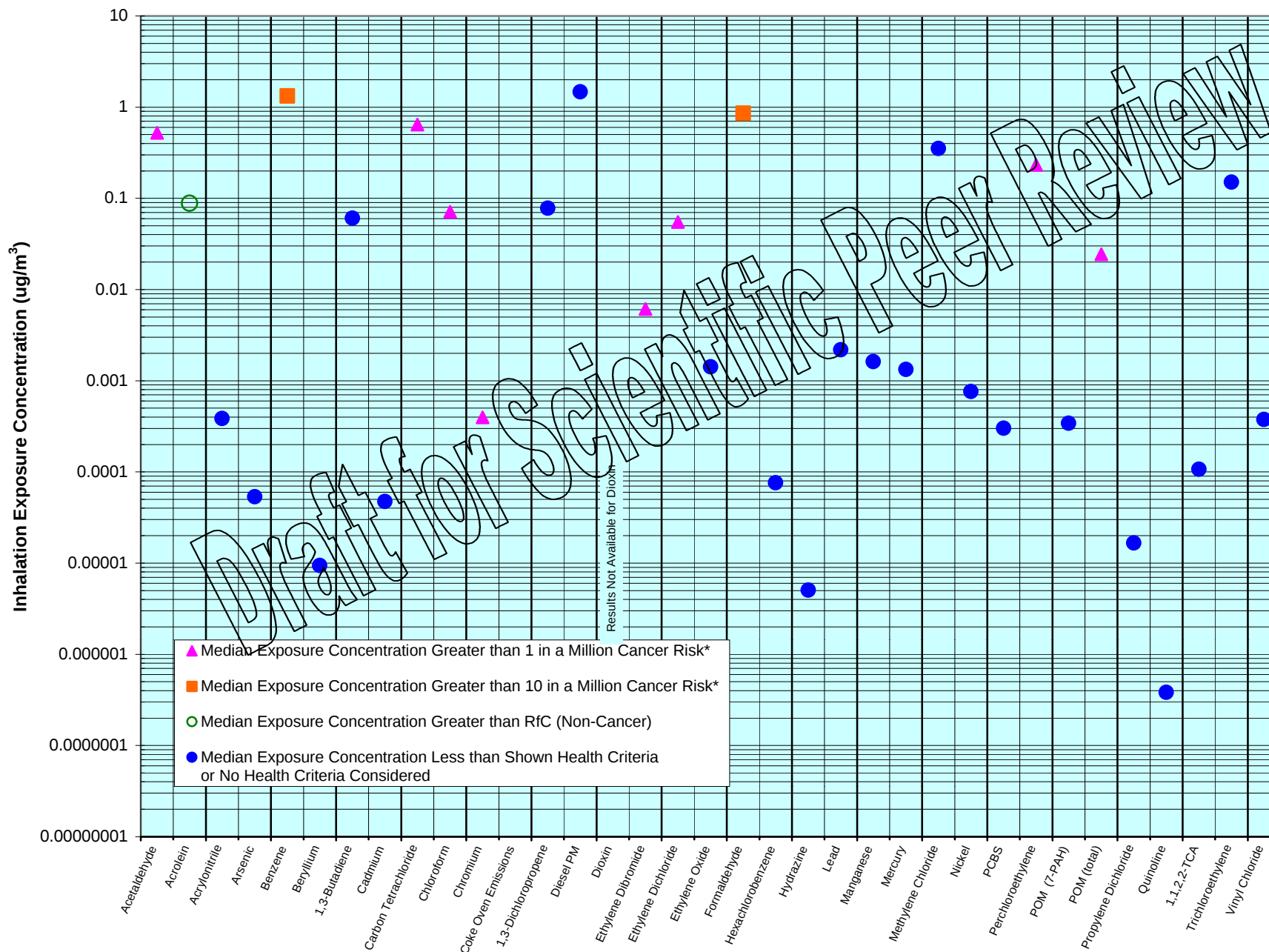
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Puerto Rico
(For Limitations On The Use of These Data See Page 2)



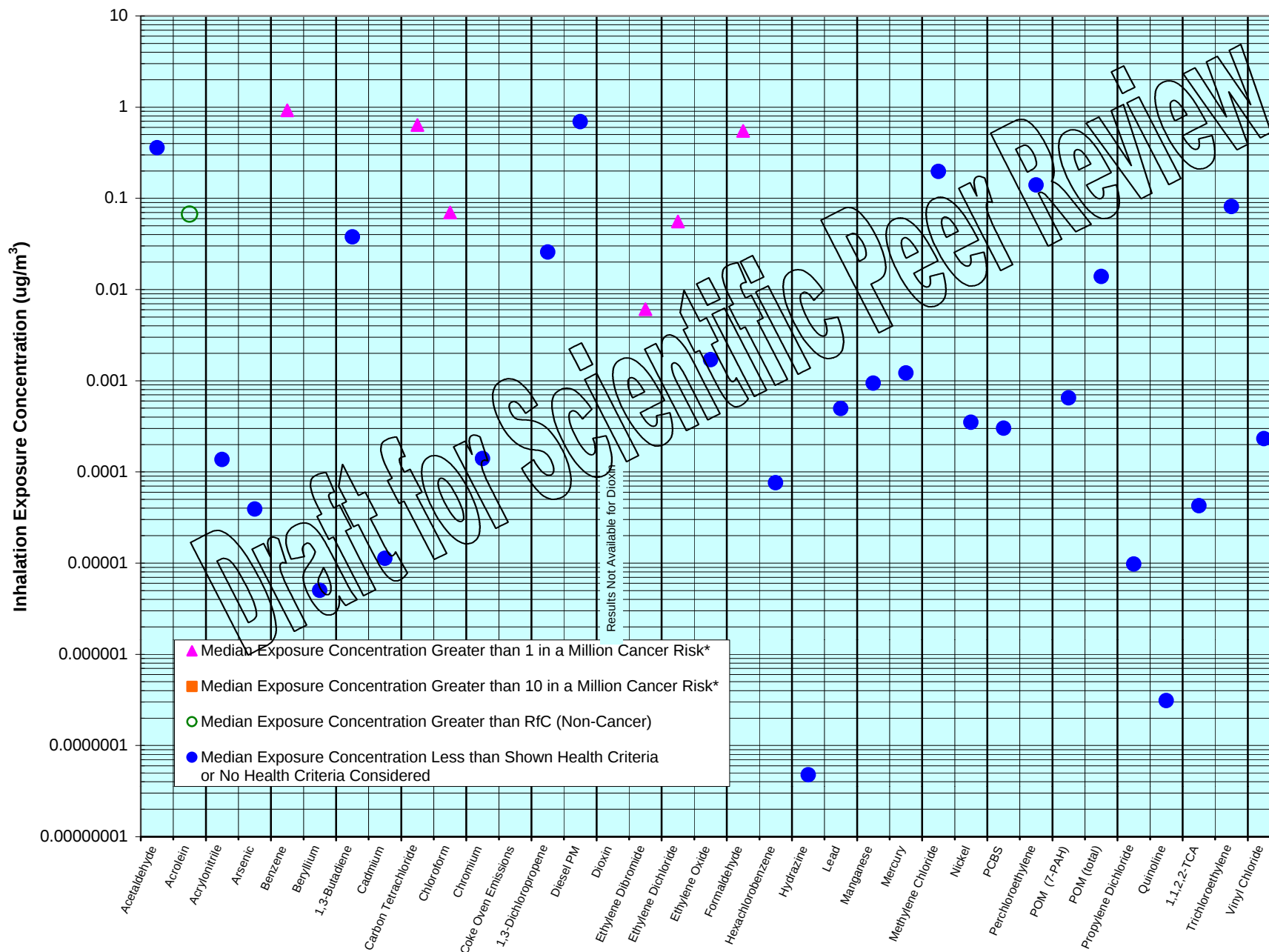
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Rhode Island (For Limitations On The Use of These Data See Page 2)



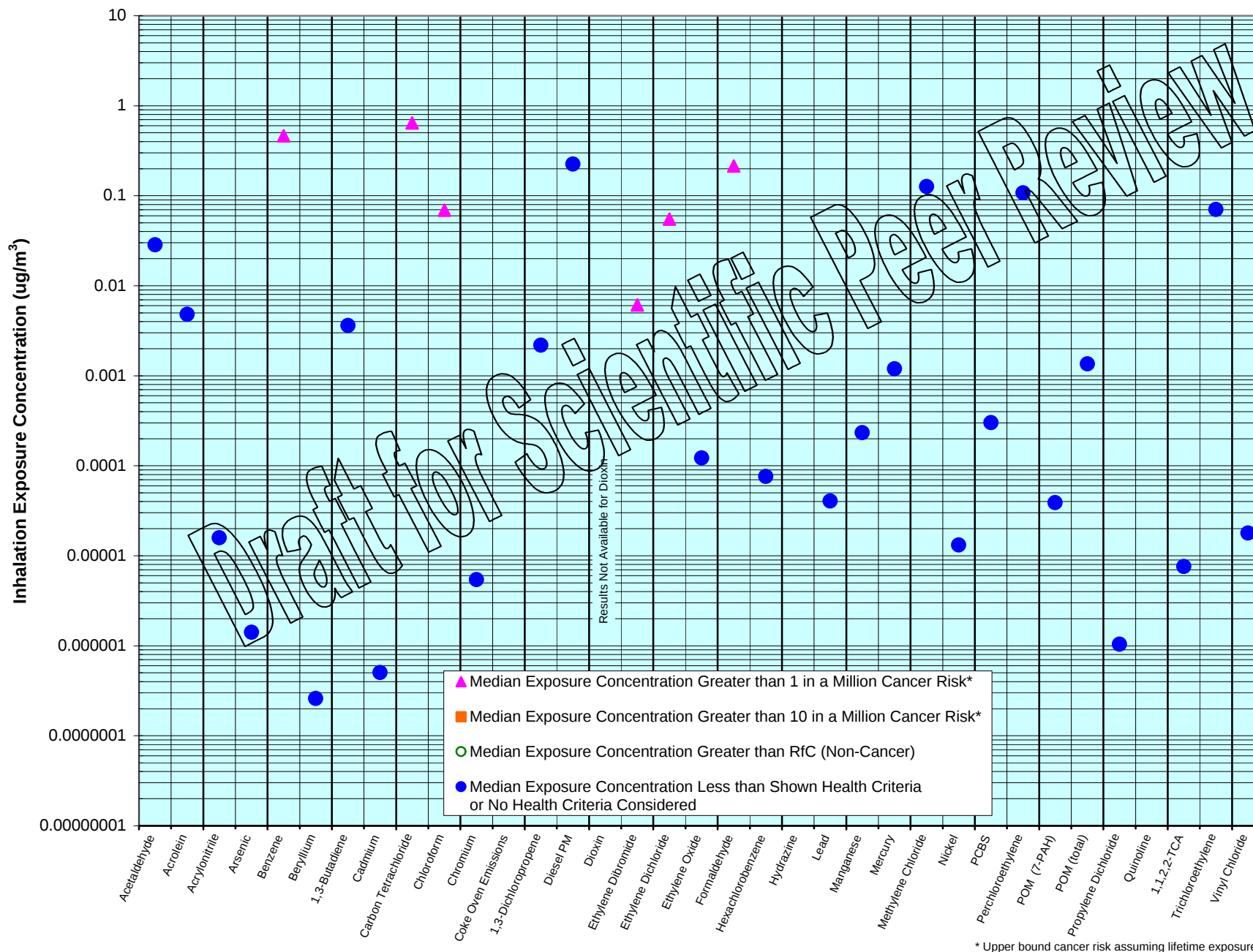
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for South Carolina (For Limitations On The Use of These Data See Page 2)



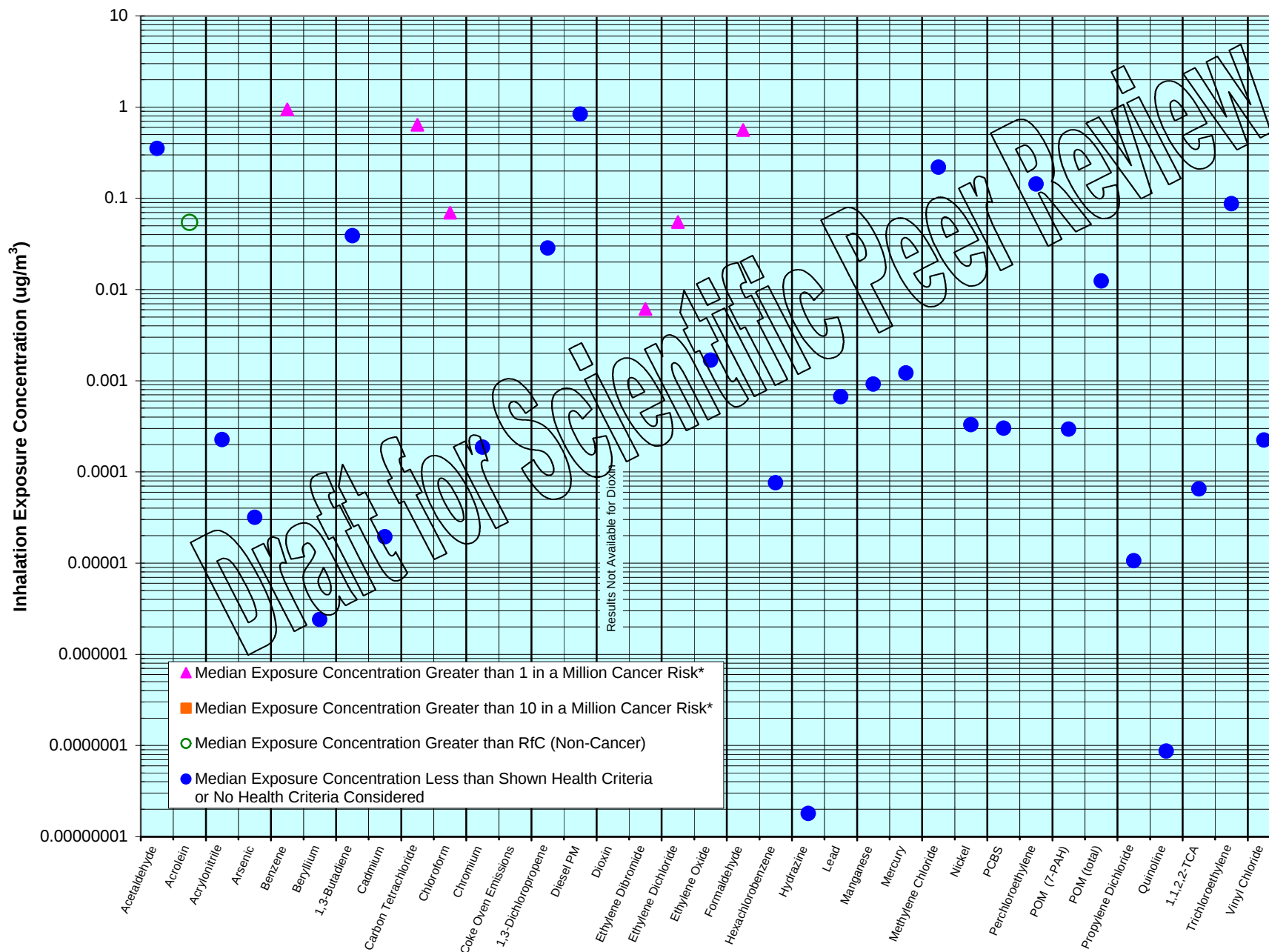
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for South Dakota (For Limitations On The Use of These Data See Page 2)



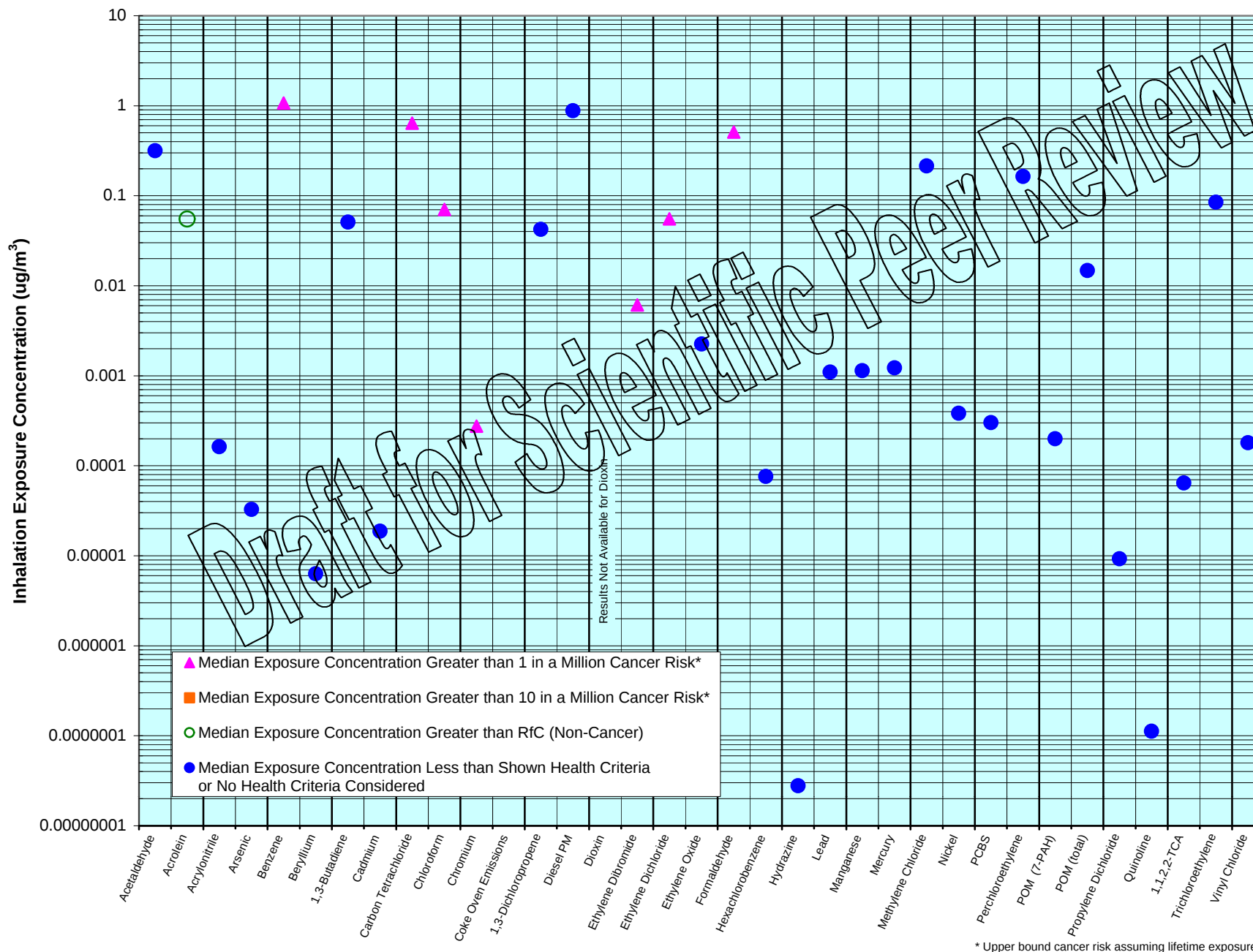
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Tennessee (For Limitations On The Use of These Data See Page 2)

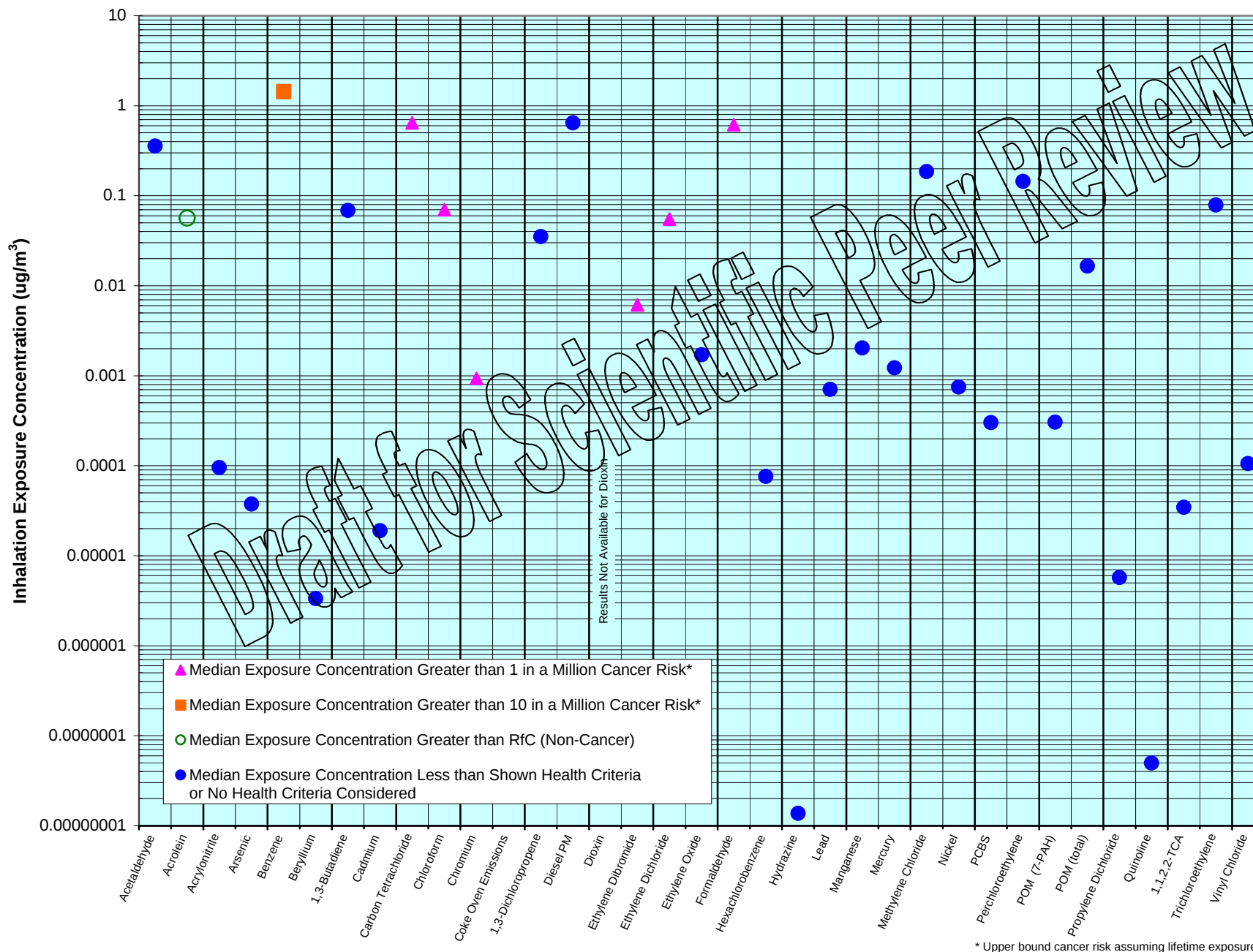


* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Texas (For Limitations On The Use of These Data See Page 2)

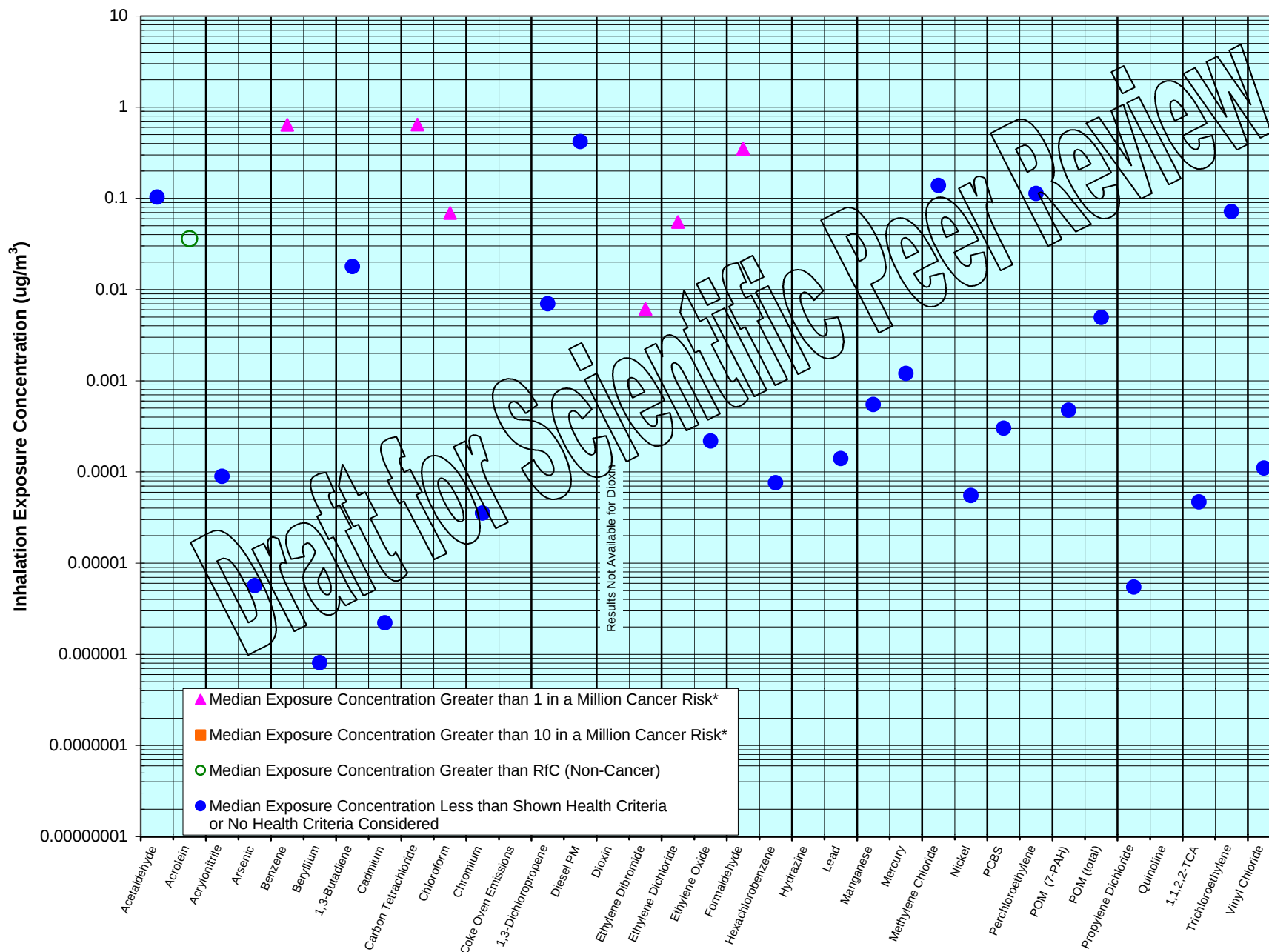


1996 Modeled Median Exposure Concentrations for Utah
(For Limitations On The Use of These Data See Page 2)



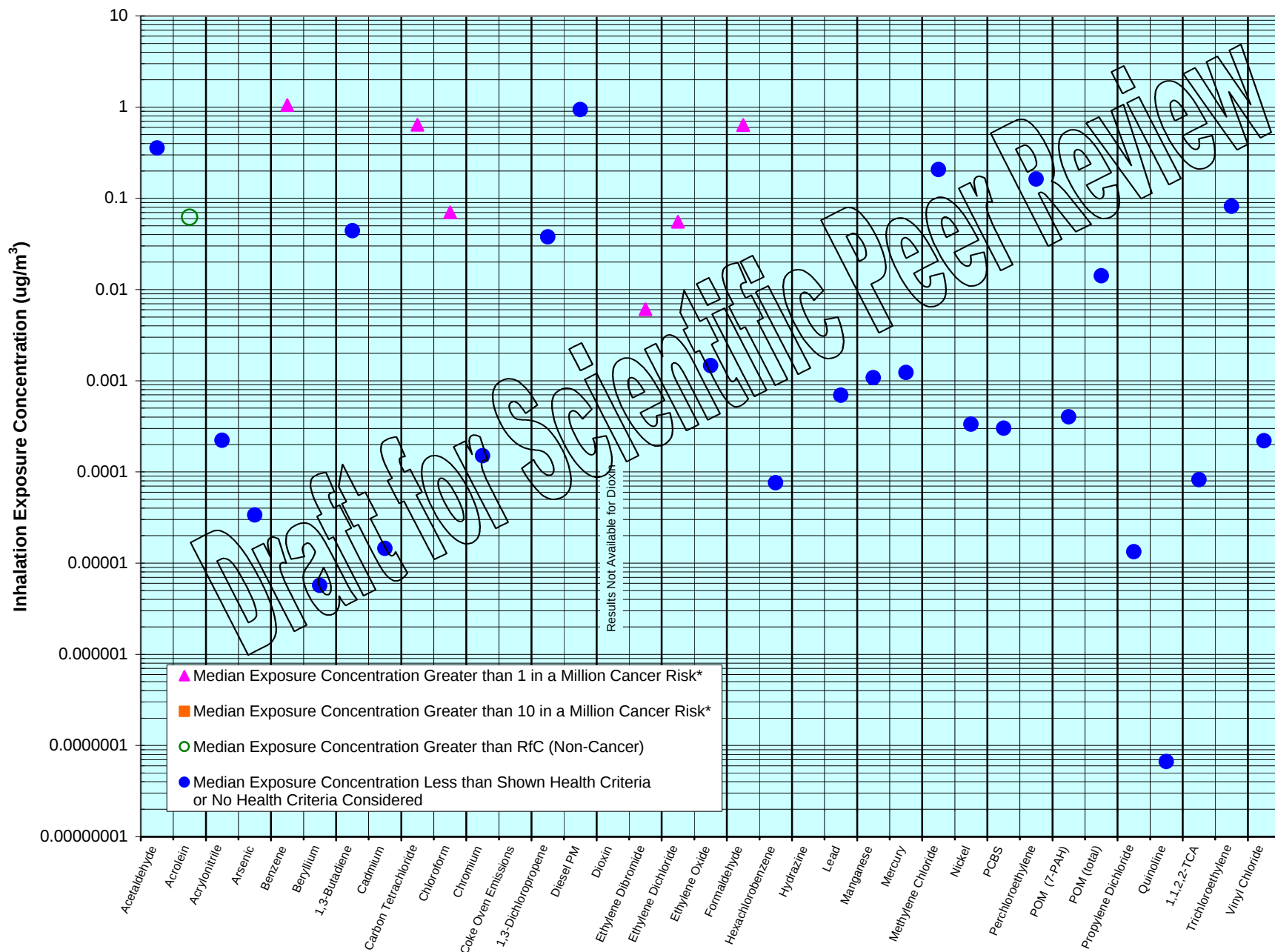
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Vermont (For Limitations On The Use of These Data See Page 2)



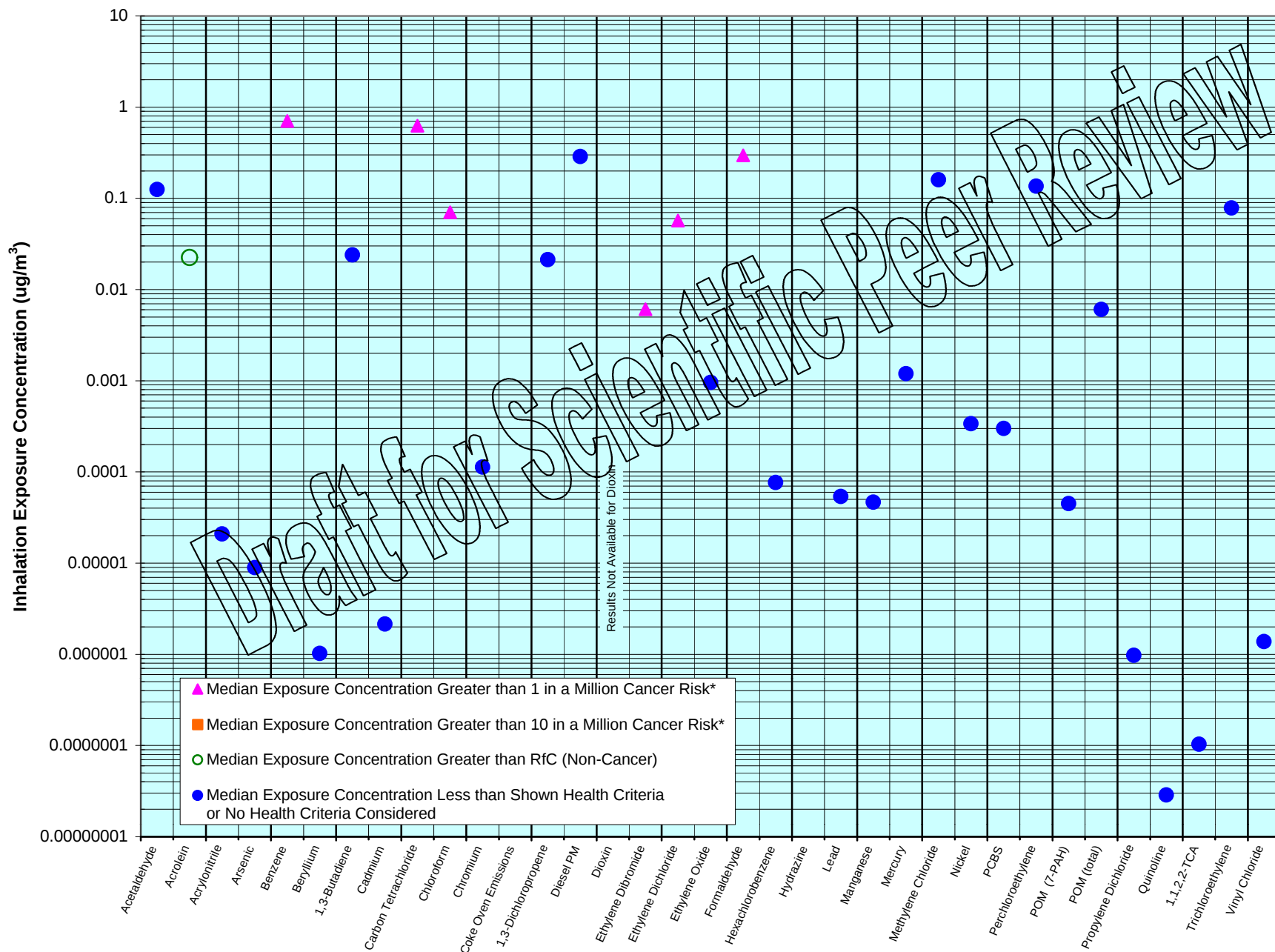
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Virginia (For Limitations On The Use of These Data See Page 2)



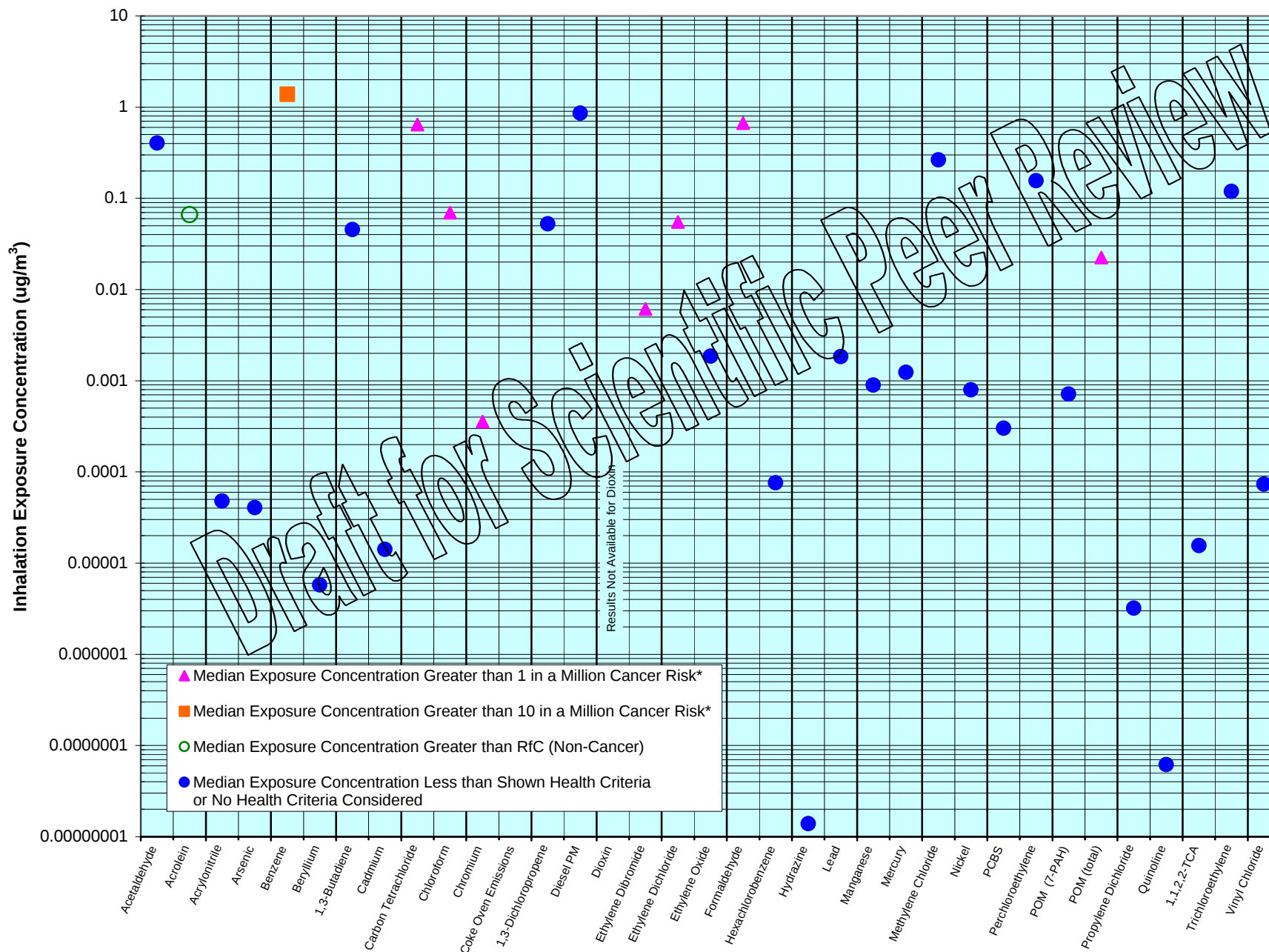
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Virgin Islands
(For Limitations On The Use of These Data See Page 2)



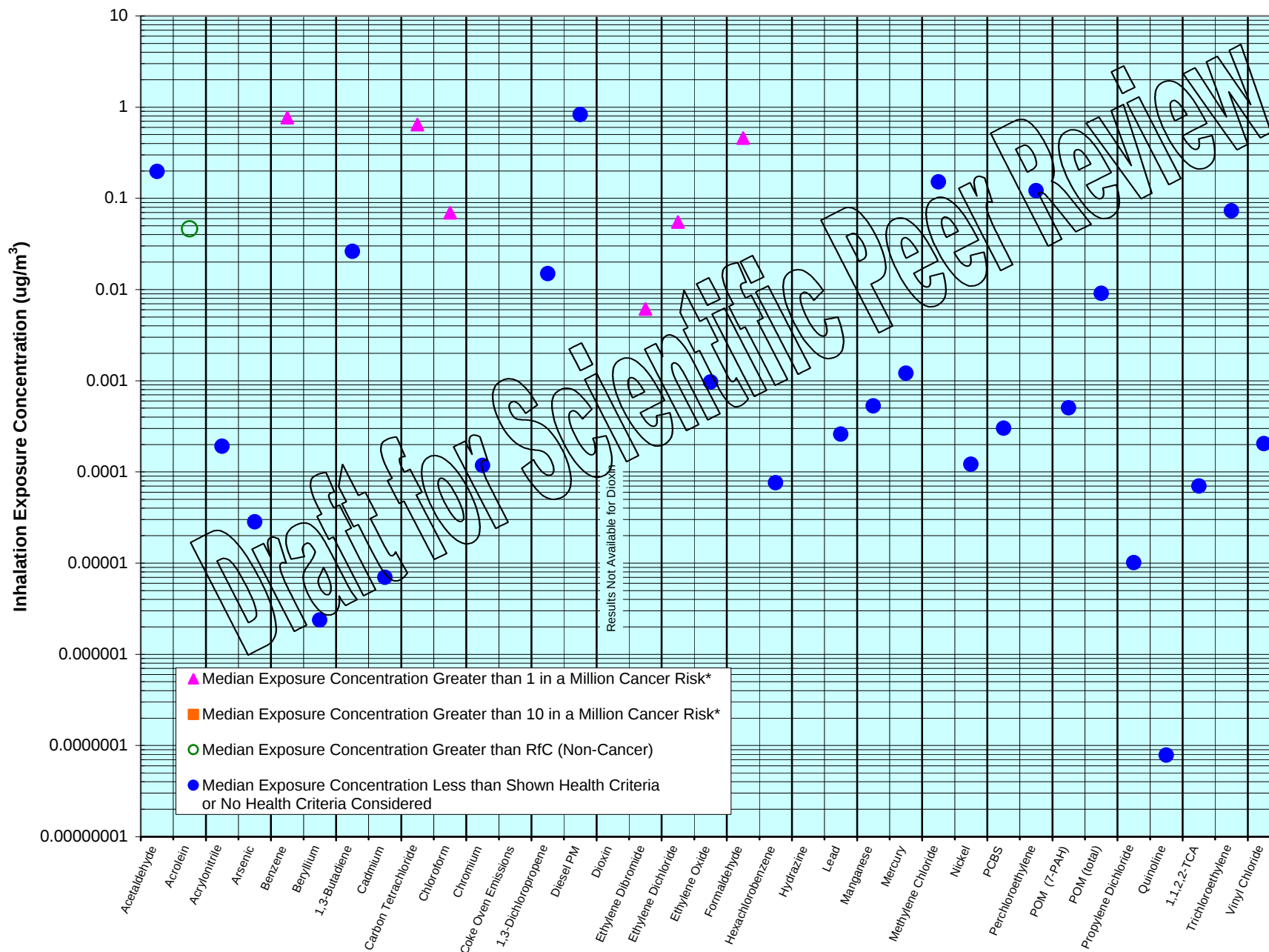
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Washington (For Limitations On The Use of These Data See Page 2)



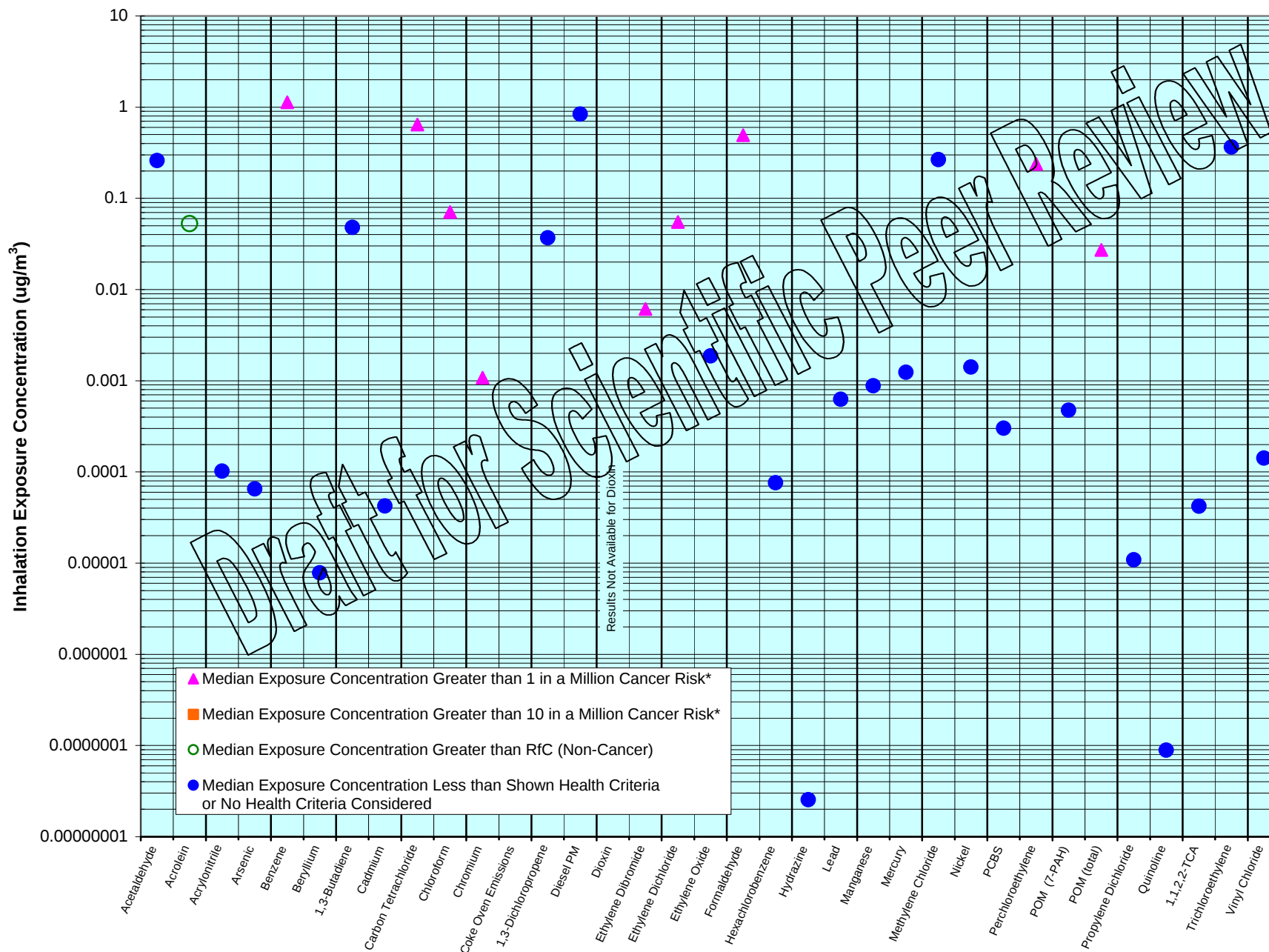
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for West Virginia
(For Limitations On The Use of These Data See Page 2)



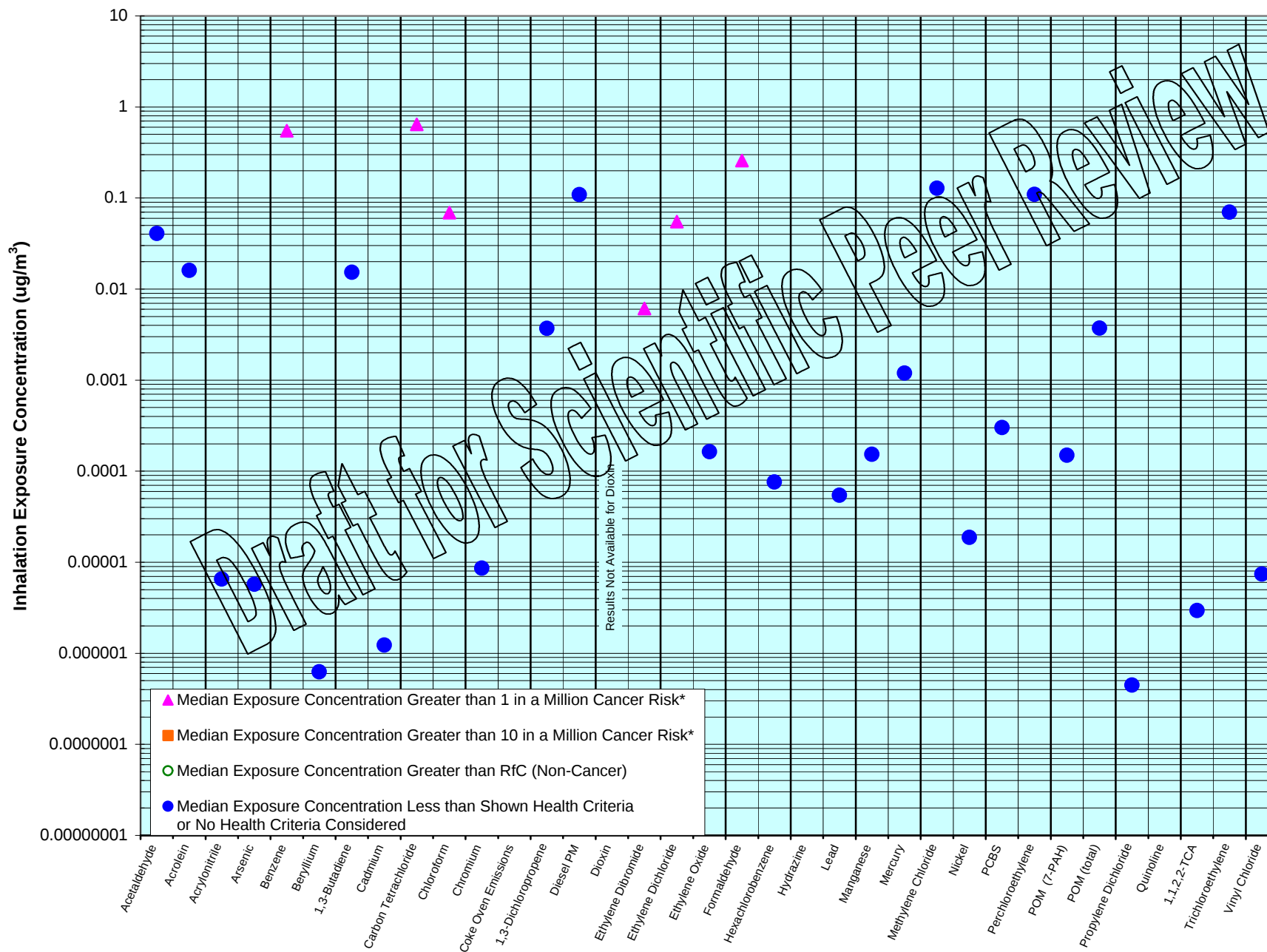
* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Wisconsin (For Limitations On The Use of These Data See Page 2)



* Upper bound cancer risk assuming lifetime exposure

1996 Modeled Median Exposure Concentrations for Wyoming
(For Limitations On The Use of These Data See Page 2)



* Upper bound cancer risk assuming lifetime exposure

EPA strongly cautions that these modeling results should not be used to draw conclusions about local exposure concentrations or risk. The results are most meaningful when viewed at the state or national level; for smaller areas, the modeling becomes less certain. In addition, these results represent conditions in 1996 rather than current conditions and only include exposures from outdoor sources of air toxics.

- c The exposure estimates presented above represent midrange estimates of population exposures. Due to a number of factors, some individuals may have substantially higher or lower exposures. It is important to note that the model, as applied on the national scale, is not designed to quantify these extreme values of individual exposures.
- c Note that for certain chemicals, exposure pathways other than inhalation as well as indoor sources of air toxics may contribute substantially to total exposures of concern. This assessment does not address these other routes of exposure (i.e., ingestion or dermal) or inhalation exposure resulting from indoor sources.
- c The emissions used in this assessment do not reflect potentially significant emission reductions that have taken effect since 1996, including those from: 1) mobile source regulations which are being phased in over time; 2) many of the air toxics regulations EPA has issued for major industrial sources; 3) State or industry initiatives; and 4) any facility closures.
- c Simplified modeling assumptions may introduce significant uncertainties into each component of the assessment. See the full discussion of these limitations.
- c Because of these uncertainties, EPA will not use the results of this assessment to determine source-specific contributions or to set regulatory requirements. However, EPA expects to use these results to inform decisions about the priorities of the air toxics program as well as to guide the collection of additional data that could lead to regulatory decisions.
- c EPA provides cancer risk estimates for carcinogens at various exposure levels (e.g., 100 in a million) to assist readers in placing the exposure levels in context. The interpretation of a risk level of 100 in a million is that an individual continually exposed to a pollutant at this level over the course of a lifetime sustains a 100 in a million chance of contracting cancer as a result of that exposure. All risk estimates are considered conservative, but not worst-case. True risk would probably be less, but could be greater.
- c EPA also provides hazard quotient (HQ) values for non-carcinogens at various exposure levels (e.g., HQ=1.0) to assist readers in placing the exposure levels in context. The HQ is the ratio of a given exposure level to the reference concentration (RfC), which in turn is an estimate of the continuous lifetime inhalation exposure which the EPA believes is likely to be without appreciable risk of deleterious non-cancer effect. Thus, if HQ=1.0, the predicted exposure concentration is equivalent to the RfC level for that pollutant. While exposures below the RfC are believed safe, exposures above the RfC are not necessarily harmful. Nevertheless, as exposure increases above the RfC, the risk for adverse effects also increases.
- c It is important to realize that these risk and HQ levels are not regulatory levels – they are provided to help in judging the relative importance of these different pollutants with regard to their potential to create adverse health effects. The determination of what risk or HQ levels are acceptable or unacceptable depends on additional factors and more refined information, and is not addressed in this assessment.
- c Health effects information is available at: www.epa.gov/ttn/uatw/hapindex.html