

**Guidelines for Using Consistent Names and Units in
ICARTT Format Data Files**
March 16, 2006

Overview

The purpose of these guidelines is to provide a means for ICARTT data file format users to implement consistent variable names and units.

- These names and units (column headings) can be used to report measurements and metadata for various data types across multiple platforms.
- These names and units have been constructed to be “friendly” to most data user software and data systems. The combined name and unit column headings will be no longer than 30 characters.
- The chemical names are cross referenced with CAS Registry Numbers and CAS Ninth Collective Index nomenclature when applicable. Names for other chemical and physical measurement types and metadata are cross referenced with NARSTO Data Exchange Standard names. In both instances, this permits a nominal cross reference to the NARSTO DES data file format.
- Cross references to other organizational standards can be added (e.g., EPA AQS Parameters)
- These **accepted designations for names and units** of chemical and physical constituents and descriptive attributes (metadata) are maintained by the MILAGRO data management team [[link](#)]. Contact the MILAGRO data management team for assistance and to add new names and units.

Specific guidance

Please follow these links to more detailed guidance documents.

Constructing Column Headings for ICARTT format data files with accepted variable names and units: [Column Headings 20060208.pdf](#)

Accepted Names:

- | | |
|----------------------------------|--|
| • Sampling, QC, and Metadata: | Names_sampling_qc_20060125.xls |
| • Meteorological Measurements: | Names_meteorological_20060125.xls |
| • Elements and Ions: | Names_element_ions_20060125.xls |
| • Chemicals without CAS RNs: | Names_Chems_without_CAS_20060125.xls |
| • Particle-related Measurements: | Names_particles_20060125.xls |
| • Light and Optical Properties: | Names_optical_20060125.xls |
| • Chemicals – Organics: | Names_chem_organics_20060202.xls |

- Chemicals – PCBs: [Names_chem_PCB_20060203.xls](#)
- Chemicals – Hopanes, etc.: [Names_chem_hopanes_20060203.xls](#)
- Chemicals – Co-eluting pairs: [Names_chem_co-eluting_organics_20060203.xls](#)
- **Essential Guide for Interpreting Codes used in Accepted Chemical Names**
[Names_chem_code_readme.pdf](#)

Accepted Units:

- Units Designation for all Name Types: [Units_to_append_20060125.xls](#)

Accepted designations for **names and units** of chemical and physical constituents and descriptive attributes (metadata) are maintained by the MILAGRO data management team [[link](#)]. Contact the MILAGRO data management team for assistance in adding new unit designations.

All files referenced in this document may be accessed through the

- NARSTO QSSC Web Site [<http://cdiac.ornl.gov/programs/NARSTO/>]

Example ICARTT Format Data File

Column Headings:

This link is an example ICARTT format data file that incorporates the **variable_code naming approach for column headings** described above.

[ICARTT_DES_template_20051220.xls](#)

See **Rows 11-33** for the list of variables and **Row 71** for the column headings.

Prototype ICARTT-DES Formatted Data File:

This file is also a prototype of what we might call an “ICARTT-DES formatted data file”.

- It incorporates the new consistent *variable_code* naming approach.

- Along with the list of “column headings” in **Rows 11-33** are corresponding cross references in Columns B-E to the
 - NARSTO DES standard name (included in Accepted Names “Names_*.xls” files),
 - CAS RN (included in Accepted Names “Names_*.xls” files),
 - code type (DES name type), and
 - the full DES standard units.
 - Note that picklists are included for the name type and units cell standard values.

- In **Rows 35-52**, the Special Comments lines, are the
 - Key Phrases used in the DES formatted data file are in Column A and
 - the respective values for this example using Robert Talbot’s data are in Column B.
 - Additional columns of Key Phrase values could be added as needed to describe the column_headings.
 - Note that picklists are included for all of the Key Phrases to select standard values.