# Appendix D: Tables as part of an Emission Summary and Dispersion Modelling Report

## Table D-1: Suggested Format for a Sources and Contaminants Identification Table

| Source ID | Source Description or Title | General Location | Expected Contaminants(there may be multiple contaminants for each source) | Contaminant Included in Modelling?Significant(Yes or No) |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Notes for Table D-1: Suggested Format for a Sources and Contaminants Identification Table: It is optional to identify the reference information that was used to identify the Expected Contaminants from the facility. But if it is used, please ensure it is correct and matches the model input files.

## Table D-2a: Suggested Format for a Source Summary Table

### Format 1 – Sorted by Contaminant

|  Contaminant | CAS # | Source ID | Source Description | Stack Volumetric Flow Rate(Am3/s) | Stack Exit Gas Temperature(oC) | StackInnerDiameter(m) | Stack Height Above Grade(m) | Stack Height Above Roof (m) | Source Coordinates(x,y)(m) | Maximum Emission Rate(g/s) | Averaging Period(hours) | Emission Rate Estimating Technique | Sample Calculation Identifier | Emissions Data Quality | % of Overall Emissions (%) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Notes for Table D-2a: Suggested Format for a Source Summary Table:

1. Source ID: should provide information on the modelling source type (e.g., Point, Area or Volume Source); the process source or sources within the modelling source (e.g., Process Line #1); and the stack or stacks within each process source . Please ensure the Source IDs match the model input files. If the Source ID terminology is modified in subsequent ESDM reports, a note to highlight the changes in terminology for each Source ID are to be included for clarity and comparisons.
2. Emission rate estimating Technique Short-Forms: “V-ST” means Validated Source Test; “ST” means Source Test; “EF” means Emission Factor; “MB” means mass balance; “EC” means engineering calculation
3. Data Quality Categories: Highest; Above-Average; Average; and Marginal.
4. Alternate Table Formats: are acceptable if they provide the information required, under paragraph 8 of subsection 26 (1), of the Regulation, for a source summary table. In addition, multiple source summary tables can be used. The Source Summary Table should contain sufficient information to correlate the sources with the contaminants. For site-specific standard requests, the table must be sorted by contaminant.
5. Sample Calculation Identifier: Sample calculation for each different source, contaminant or estimation method should be numbered and presented in the Appendix. It is not necessary to repeat the sample calculation if same approach is used to for multiple source and/or contaminant.

## Table D-2b: Suggested Format for a Source Summary Table

### Format 2 – Sorted by Source

|  Source Identifier | Source Description | Stack Volumetric Flow Rate (Am3/s) | Stack Exit Gas Temperature (oC) | Stack Inner Diameter (m) | Stack Height Above Grade (m) | Stack Height Above Roof (m) | Source Coordinates (x,y) (m) | Contaminant | CAS # | Maximum Emission Rate (g/s) | Averaging Period (hours) | Emission Rate Estimating Technique | Sample Calculation Identifier | Emissions Data Quality | % of Overall Emissions (%) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Notes for Table D-2b: Suggested Format for a Source Summary Table:

* 1. Source ID: should provide information on the modelling source type (e.g., Point, Area or Volume Source); the process source or sources within the modelling source (e.g., Process Line #1); and the stack or stacks within each process source. Please ensure the Source IDs match the model input files. If the Source ID terminology is modified in subsequent ESDM reports, a note to highlight the changes in terminology for each Source ID are to be included for clarity and comparisons.
	2. Emission rate estimating Technique Short-Forms: “V-ST” means Validated Source Test; “ST” means Source Test; “EF” means Emission Factor; “MB” means mass balance; “EC” means engineering calculation.
	3. Data Quality Categories: Highest; Above-Average; Average; and Marginal.
	4. Alternate Table Formats: are acceptable if they provide the information required, under paragraph 8 of subsection 26 (1) of the Regulation, for a source summary table. In addition, multiple source summary tables can be used.
	5. Sample Calculation Identifier: Sample calculation for each different source, contaminant or estimation method should be numbered and presented in the Appendix. It is not necessary to repeat the sample calculation if same approach is used to for multiple sources and/or contaminant.

## Table D-3: Suggested Format for a Dispersion Modelling Input Summary Table

| Relevant Section of the Regulation | Section Title | Description of How the Approved Dispersion Model was Used |
| --- | --- | --- |
| Section 6 | Approved Air Dispersion (include Model Versions) |  |
| Section 8 | Negligible Sources |  |
| Section 9 | Same Structure Contamination |  |
| Section 10 | Operating Conditions |  |
| Section 11 | Source of Contaminant Emission Rates |  |
| Section 12 | Combined Effect of Assumptions for Operating Conditions and Emission Rates |  |
| Section 13 | Meteorological Conditions (include AERMET version) |  |
| Section 14 | Area of Modelling Coverage |  |
| Section 15 | Stack Height for Certain New Sources of Contaminant |  |
| Section 16 | Terrain Data |  |
| Section 17 | Averaging Periods |  |

## Table D-4: Suggested Format for an Emission Summary Table

| Contaminant Name | Contaminant CAS # | Total Facility Emission Rate (g/s) | Air Dispersion Model Used (include version code) | Maximum POI Concentration (µg/m3) | Averaging Period (hours) | Ministry POI Limit (µg/m3) | Limiting Effect | Regulation Schedule # | Percentage of Ministry POI Limit (%) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

The term “Ministry POI Limit” identified in Table D-4 refers to the following information (there may be more than one relevant ministry POI Limit for each contaminant):

air standards in Schedules 2 and 3 of the Regulation; and

the guidelines for contaminants set out the ministry publication, “Summary of Standards and Guidelines to Support Ontario Regulation 419: Air Pollution – Local Air Quality” (as amended) and can be found on the ministry’s web site.

an acceptable concentration for contaminants with no standards or guidelines. This may include reference to the

Jurisdictional Screening Levels (JSLs).

Note: if a facility is subject to section 20 and a contaminant has a standard (or guideline) with more than one averaging period, then the Emission Summary Table must include an assessment against each standard and its appropriate averaging period.

For contaminants with an annual standard, where applicable, the Emission Summary Table should a review against the standard with the annual averaging period as well as a review against the daily and annual “Assessment Vales”. For more information on Assessment Values, please refer to the technical bulletin: “Methodology for Assessment of Contaminants with Annual Average Standards under O. Reg. 419/05” (as amended) and available on the ministry website.