



CODE OF PRACTICE FOR THE REDUCTION OF
VOLATILE ORGANIC COMPOUND EMISSIONS
FROM CUTBACK AND EMULSIFIED ASPHALT
REPORT FORM USER GUIDE

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1.0 WELCOME

The Code of Practice for the Reduction of Volatile Organic Compound (VOC) Emissions from Cutback and Emulsified Asphalt came into effect on February 25, 2017. The main objective of this Code of Practice (the Code) is to protect the environment and the health of Canadians while maintaining road safety by recommending best practices that encourage, when suitable, the use of low VOC emitting asphalt. It is anticipated that compliance with the Code would result in annual VOC emission reductions of up to 5000 tonnes from the use of asphalt.

The purpose of this user guide is to provide reporters with step-by-step guidance to complete and submit reports.

As outlined in the Code, individuals and organizations who meet the conditions of section 3.1 are being asked to submit reports, this includes:

- **manufacturers of cutback asphalt;** or
- **manufacturers of emulsified asphalt.**

Manufacturers of cutback asphalt and emulsified asphalt product alternatives are also encouraged to submit reports.

The first report should be sent by March 31, 2018 and should cover the previous calendar year's activities (2017). Subsequent reports should be sent every two years by March 31 of those years, covering the previous calendar year's activities.

To access the Code of Practice, see the following link: www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/guidelines-objectives-codes-practice/reduction-volatile-organic-compound-emulsified-asphalt.html

For additional information on Cutback Asphalt and Emulsified Asphalt, see the following link: www.canada.ca/en/environment-climate-change/services/managing-pollution/sources-industry/volatile-organic-compounds-consumer-commercial/cutback-asphalt-emulsified.html

2.0 GETTING STARTED

The report form is available in a Word, PDF or Excel format. You may print out and fill the report form by hand or complete the form electronically. This guide focuses on how to properly fill out the report form electronically using the Excel spreadsheet format however the instructions describing how to fill in the report apply to all formats. Notes have been provided to describe any differences to the PDF or Word formats.

The report form can be downloaded from www.canada.ca/en/environment-climate-change/services/managing-pollution/sources-industry/volatile-organic-compounds-consumer-commercial/cutback-asphalt-emulsified.html or requested via e-mail at: ec.produits-products.ec@canada.ca.

To get started, save the report form Excel file to your computer. Once you have opened the file, the worksheet entitled "Report Form" will appear. This is the worksheet that requires your input (see Figure 1).

The second tab labelled "Appendix" is extra space for information you may need to enter for Section 3 of the report form, if more space is needed.

3.0 COMPLETING THE REPORT

The first step is to indicate the calendar year being reported. This field is the topmost field in the form. The calendar year begins on January 1st and ends on December 31st.

To make input easier, the Excel spreadsheet can be navigated using the “Tab” key on your keyboard.

3.1 Section 1 – General information on the manufacturer

An explanation for the information required for each box is listed below.

1. Organization Name Enter your Canadian organization’s name. Reports from different entities may be submitted under one organizational name if there is common ownership.

2. Civic Address¹ The civic address is the physical address of the organization.

Report the main address for the office. Street number and name, unit number (if applicable), city, province/state, country and postal code/zip code. Please also provide the organization’s e-mail address, if any.

3. Postal Address¹ The postal address is the mailing address of the organization (i.e. its place of business).

Please use the dropdown menu to indicate if the postal address is the same as the civic address. The dropdown menu provides two options to choose from: “YES” or “NO”. Note that one of the two options must be selected from the dropdown menu.

If the mailing address differs from the civic address, report the postal address. Street number and name, unit number (if applicable), city, province/state, country and postal code/zip code.

1. Only one report per organization is requested, from the principal address (i.e. head office), covering all Canadian facilities/locations.
2. If there is more than one facility in the province or territory, calculate the percentage based on the sum of the total production of all the facilities in that province or territory.

3.2 Section 2 – Facility information

1. Number of Facilities List the number of facilities/locations your company owns or operates that corresponds to each province/territory.

For provinces/territories without facilities, please enter “0” in this column.

2. % Cutback Asphalt² For each province and territory containing at least one facility, indicate the percentage of cutback asphalt produced during the calendar year in that province or territory relative to the total quantity produced in Canada. The sum of the percentages of this column should equal 100 %.

3. % Emulsified Asphalt² For each province and territory containing at least one facility, indicate the percentage of emulsified asphalt produced during the calendar year in that province or territory relative to the total quantity produced in Canada.

The sum of the percentages of this column should equal 100 %.

4. % Alternative Products² For each province and territory containing at least one facility, indicate the percentage of alternative products, if any, produced during the calendar year in that province or territory relative to the total quantity produced in Canada.

The sum of the percentages of this column should equal 100 %.

For a complete list of definitions as found in the Code of Practice, please see [Annex 1](#).

3.3 Section 3 – Information with respect to the asphalt products manufactured and sold

The goal of this section is to quantify the asphalt manufactured and sold during the calendar year, and their VOC content. Below is an explanation of the information being requested for each column of the table.

If the table provided is too small, you can include additional information for Section 3 in the table contained in the second tab of the workbook labelled “Appendix” on the bottom left corner of the Excel spreadsheet.

1. Product Name	For each asphalt-product manufactured and/or sold during the calendar year, provide the common or commercial name.
2. Type of Asphalt	For each asphalt product, please use the dropdown menu to indicate the type of asphalt. The dropdown menu provides three options to choose from: “CUTBACK”, “EMULSIFIED” or “ALTERNATIVE” Note: one of the three options must be selected from the dropdown menu.
3. Ozone Season	Please use the dropdown menu to indicate if the product was manufactured or sold during the ozone season (May 1 through September 30). The dropdown menu provides two options to choose from: “YES” or “NO”. If the product was manufactured and/or sold both during and outside of ozone season, then the reporter should provide the information on two separate lines. Note: one of the two options must be selected from the dropdown menu.

4. Quantity Manufactured (tonnes)	For each asphalt product, indicate the quantity, in tonnes, manufactured in Canada during the period from January 1 st to December 31 st of the reporting year. The units are in metric tonnes.
5. Quantity Sold (tonnes)	For each asphalt product, indicate the quantity, in tonnes, sold in Canada during the period from January 1 st to December 31 st of the reporting year. The units are in metric tonnes.
6. VOC Content (% by volume)³	For each product, enter the percentage of VOC content contained in the volume of that product.
7. VOC Content (% by weight)³	For each product, enter the percentage of VOC content contained in the weight of that product.

3.4 Section 4 – Confidentiality

Please use the dropdown menu to indicate if the report contains information that your company wishes to be treated as confidential. The dropdown menu provides two options to choose from: “YES” or “NO”.

Note: one of the two options must be selected from the dropdown menu.

If “YES” is selected from the dropdown menu, please fill in sections a) through d) to provide supporting information on your request for confidentiality.

The information provided can be general or specific. For example, “All the information with respect to the asphalt products manufactured and sold, as provided in Section 3 of the report.” Or, “All of the information provided in Section 3 of the report”.

3.5 Section 5 – Submission of report

The final section of the report requires the contact information of the organization’s representative. This could be the individual filling out the report form or the point of contact on behalf of the organization.

3. Standard test methods for emulsified and cutback asphalt are provided in the Code of Practice.

1. Representative's contact information	Enter the name, job title, phone number and e-mail address of the representative.
2. Representative's address	<p>Please use the dropdown menu to indicate if the representative's address is the same as the civic address provided in section 1. The dropdown menu provides two options to choose from: "YES" or "NO".</p> <p>Note: one of the two options must be selected from the dropdown menu.</p> <p>If the representative's office address differs from the civic address provided in section 1, report the representative's address. Street number and name, unit number (if applicable), city, province/state, country and postal code/zip code.</p>
3. Representative's Signature	<p>Once the report is completed, the organization's representative can electronically sign the report.</p> <p>First use the dropdown menu to indicate the truth accuracy of the information provided. The dropdown menu provides two options to choose from: "YES" or "NO". Note that one of the two options must be selected from the dropdown menu.</p> <p>To electronically sign the document, double click the signature line. A pop-up window will provide you with the option to either type your name or upload an image of a signature. Once this is completed click the "Sign" button.</p> <p>You may also choose to print and sign the report form by hand and submit it accordingly.</p> <p>These options exist for all formats.</p>

The report can be submitted by mail/post, fax, or e-mail.

4.0 CONTACT INFORMATION

If you require further assistance, please contact the Products Division of Environment and Climate Change Canada by telephone at 1-888-391-3426 or by e-mail at ec.produits-products.ec@canada.ca.

Additional contact information for the submission of Report forms is also provided below:

Products Division - VOC Asphalt Report

Environment and Climate Change Canada

Mail: 351 St-Joseph Boulevard, 9th floor
Gatineau, QC K1A 0H3

Fax: 819-938-4480 or 1-888-391-3695

E-mail: ec.produits-products.ec@canada.ca

ANNEX 1 – DEFINITIONS

Per section 1.2 of the Code of Practice, the following definitions apply to the Code of Practice for the Reduction of Volatile Organic Compound (VOC) Emissions from Cutback and Emulsified Asphalt:

Asphalt cement: A dark brown to black cement-like residuum obtained from the distillation of suitable crude oils. The distillation process may involve one or more of the following: atmospheric distillation, vacuum distillation, steam distillation. Further processing of distilled residuum may be needed to yield a material whose physical properties are suitable for commercial applications. The additional processes can involve air oxidation, solvent stripping or blending of residua of different stiffness characteristics.

ASTM: American Society of Testing and Materials.

Crude oil: Unrefined petroleum product composed of hydrocarbon deposits. Any use of crude oil in an asphalt application falls within the scope of this Code.

Cutback asphalt: Asphalt cement whose viscosity has been reduced by the addition of a cutback solvent derived from petroleum. There are three major types of cutback asphalt based on the relative rate of evaporation of the solvent:

- **Rapid-curing:** Asphalt cement combined with a light petroleum diluent of high volatility, generally with a boiling point similar to gasoline or naphtha and as further defined by ASTM D2028 / D2028M “Standard Specification for Cutback Asphalt (Rapid-Curing Type)”.
- **Medium-curing:** Asphalt cement combined with a petroleum diluent of intermediate volatility, generally with a boiling point similar to kerosene and as further defined by ASTM D2027 / D2027M “Standard Specification for Cutback Asphalt (Medium-Curing Type)”.
- **Slow-curing:** Asphalt cement combined with a petroleum diluent of low volatility, generally with a boiling point similar to fuel oil and as further defined by ASTM D2026 / D2026M “Standard Specification for Cutback Asphalt (Slow-Curing Type)”.

Cutback asphalts can be used with cold aggregates requiring little or no heat. They are most commonly used in road mixing operations, stockpile mixes and spray applications such as prime, tack and seal coats. For the purpose of this Code, cutback asphalts also include any crude petroleum oils and road oils used for road construction and maintenance.

Emulsified asphalt: A mixture of asphalt cement, water and an emulsifying agent. There are two major categories of emulsified asphalt: cationic and anionic. Anionic emulsions have negatively charged asphalt droplets and cationic emulsions have positively charged asphalt droplets. Certain grades of emulsified asphalt contain added petroleum diluent which permits a thicker film to adhere to the aggregate and promotes stronger bonding of the asphalt to the aggregate.

Several types and grades of emulsified asphalts are produced to serve specific applications:

- “RS”, “MS”, “SS” and “QS” designations refer to the emulsion setting rate of rapid-setting, medium-setting, slow-setting and quick-setting, respectively.
- A “C” preceding some of the emulsified asphalt grades designates a cationic asphalt emulsion.
- An “h” following certain grades designates a harder base asphalt in the product.

- An “HF” preceding some of the grades indicates a high-float product as measured by a float test as defined by ASTM D139 “Standard Test Method for Float Test for Bituminous Materials”. High-float products generally contain added petroleum diluent such as fuel oil, which permits a thicker film to adhere to the aggregate and promotes stronger bonding of the asphalt to the aggregate. HF products are often used with dusty or dense graded aggregate.

Emulsified asphalt products are used for road construction and for many specialty applications. RS and CRS products are generally used in spray applications such as aggregate (chip) seals and other surface treatment methods. The medium-setting grades are more commonly used for mixing with coarse aggregate for plant or road mix. The slow-setting grades are designed for maximum mixing stability and are used with dense-graded aggregate containing high fines which are used in soil stabilization, asphalt surface mixes, slurry seal applications, and tack and prime coat applications. Quick-setting grades are specialized emulsions used for quick-set slurry applications.

Governments: All orders of government, such as municipal, regional, provincial, territorial, federal and Indigenous authorities.

The Minister: The Minister of the Environment.

Ozone season: The ground-level ozone season occurs during the warm-season months, when the days are warmer and longer. The period of May 1 through September 30 is considered the ground-level ozone season in Canada, as defined in the Ozone Annex (2000) of the Canada-United States Air Quality Agreement (1991).

Person: Includes individuals, companies, organizations or governments.

Road oils: Use of crude oil in an asphalt application.

Volatile organic compounds (VOCs): Substances set out in Item 65 on the List of Toxic Substances in Schedule 1 of the Canadian Environmental Protection Act, 1999.