Welcome to the Hydraulic Fracturing and Fracture Fluid Information Site. This website is a project of the BC Oil & Gas Commission and is intended to provide objective information on Hydraulic Fracturing, Fracturing Fluids, Groundwater and Surface water protection and related oil and gas activities in Canada.

LEARN MORE

FAQs

Q. What is Hydraulic Fracturing?

A. Hydraulic fracturing, commonly referred to as "fracking", is the process of creating small cracks, or fractures, in deeply buried geological formations to allow natural gas to flow into the wellbore. The natural gas can then flow to the surface under controlled conditions through the wellhead and be collected for processing and distribution.

During the hydraulic fracturing process, a mixture of water, sand and other chemical additives designed to protect the integrity of the wellbore and enhance production is pumped under high pressure into the formation to create fractures. The fractures are kept open by sand or "proppant", which provides pathways to allow the natural gas to flow into the wellbore.
The Province of British Columbia has committed to the disclosure of hydraulic fracture fluid ingredients and this intuitive manual will take you through the step-by-step process to successfully upload your data.

Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Submitting a Report</td>
<td>2</td>
</tr>
<tr>
<td>Viewing a Report</td>
<td>14</td>
</tr>
<tr>
<td>Contact Information</td>
<td>14</td>
</tr>
<tr>
<td>Appendix 1 - FAQ</td>
<td>15</td>
</tr>
</tbody>
</table>
1 Introduction

1.1 Roles required

Each company must designate one or more individuals as company administrators within the KERMIT application. The company administrator is required to assign the “Frac Fluid Reporting” role to all staff responsible for entering the disclosure information on their company’s behalf. For instructions on how to assign roles within the KERMIT application, please refer to the following document: http://bcogc.ca/documents/guidelines/Company%20Admin.pdf.
2 Submitting a Report

Frac fluid reports can be submitted in two ways:

- Bulk uploads of records using the “Upload CSV” option.
- Entry of individual records via the “New Frac Fluid Report” option.

2.1 Uploading a Frac Fluid Report using “Upload CSV”

In order to bulk load multiple frac fluid records using the “Upload CSV” link, please follow the steps listed below:

a) Log into KERMIT using an account that has been assigned the “Frac Fluid Reporting” role.

b) Select the “Wells” tab.
c) Download the .CSV template file via the “Download CSV Template” link.

d) Complete the template with the required information and save the file.

**WA #, Fracture Date and Total Water:** This value should remain constant for all rows that contain data per WA.

**Trade Name:** Trade Name is entered for each ingredient related to the additive/ingredient.

**Supplier:** Supplier is added in each row related to the additive/ingredient.

**Purpose:** Purpose is added in each row related to the additive/ingredient.

**CAS #:** The Chemical Abstract Service Number (CAS #) is entered in this column. There should be a CAS # for each entry (where possible). In circumstances where there is no CAS # or it is ‘Undisclosed’, please leave the field blank. A CAS # is a three-part number that follows the format below:

- Part 1 – contains anywhere from 2-7 digits
- Part 2 – contains 2 digits
- Part 3 – contains 1 digit

For example, the CAS # 1234-56-7 can be entered in the cell as 1234-56-7 or 1234567; in order to prevent Excel from converting the value into a date, enclose the number in quotation marks (e.g. “1234-56-7” or “1234567”).

---

<table>
<thead>
<tr>
<th>Applications</th>
<th>Wells</th>
<th>Compliance &amp; Enforcement</th>
<th>Projects &amp; Sites</th>
</tr>
</thead>
</table>

**OIL AND GAS COMMISSION**

**TKERMIT VERSION**

- Applications
- Wells
- Compliance & Enforcement
- Projects & Sites

**Home > Wells**

**Wells**

**Frac Fluid Reports**

- New Frac Fluid Report
- Outstanding Reports
- Find Reports
- Upload CSV
- Download CSV Template
**Ingredient Name:** Name of each ingredient. May be ‘Undisclosed’ in certain circumstances.

**Max Additive Concentration(%)**: The maximum concentration for each ingredient within the additive (or trade name chemical compound).

**Max Fluid Concentration(%)**: The maximum concentration of each ingredient within the fracture fluid.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA #</td>
<td>Fracture E</td>
<td>Total Water</td>
<td>Trade Name Supplier</td>
<td>Purpose</td>
<td>Fluid Component Type</td>
<td>CAS Number</td>
<td>Ingredient Name</td>
<td>Max Additive Concentration(%)</td>
<td>Max Fluid Concentration(%)</td>
<td>Ingredient Comment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Fresh Water Mother Nitrate &amp; Carrier Fluid</td>
<td>-</td>
<td>Fresh Water</td>
<td>-</td>
<td>100</td>
<td>87.1859</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Sand (Project)</td>
<td>Proppant</td>
<td>-</td>
<td>Sand</td>
<td>100</td>
<td>11.10203</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Muno</td>
<td>YGG Indus Iron Control Agent</td>
<td>7732185</td>
<td>Water</td>
<td>60</td>
<td>0.00158</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Muno</td>
<td>YGG Indus Iron Control Agent</td>
<td>18862-53-1</td>
<td>Trisodium Phosphate</td>
<td>40</td>
<td>0.00105</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Muno</td>
<td>YGG Indus Iron Control Agent</td>
<td>“775-7826”</td>
<td>Sodium Sulphate</td>
<td>2</td>
<td>0.00005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Muno</td>
<td>YGG Indus Iron Control Agent</td>
<td>“1310-73-2”</td>
<td>Sodium Hydroxide</td>
<td>1</td>
<td>0.00003</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Corrosion Inhibitor</td>
<td>7757628</td>
<td>Methanol</td>
<td>60</td>
<td>0.00044</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Corrosion Inhibitor</td>
<td>683951677</td>
<td>Ethanol</td>
<td>30</td>
<td>0.00022</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Corrosion Inhibitor</td>
<td>683527491</td>
<td>Modified</td>
<td>30</td>
<td>0.00022</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Corrosion Inhibitor</td>
<td>1079797</td>
<td>Propargyl Alcohol</td>
<td>10</td>
<td>0.00007</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Corrosion Inhibitor</td>
<td>6474328</td>
<td>Alkenes</td>
<td>5</td>
<td>0.00004</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Corrosion Inhibitor</td>
<td>7732185</td>
<td>Water</td>
<td>40</td>
<td>0.05438</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Friction Reducer</td>
<td>64742478</td>
<td>Petroleum</td>
<td>35</td>
<td>0.04758</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Friction Reducer</td>
<td>900369</td>
<td>Poly(Acryl)</td>
<td>28</td>
<td>0.03807</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Friction Reducer</td>
<td>-</td>
<td>Undisclosed</td>
<td>7</td>
<td>0.00952</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Anti-Bacterial</td>
<td>111308</td>
<td>Glutaraldehyde</td>
<td>27</td>
<td>0.01084</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Anti-Bacterial</td>
<td>7173515</td>
<td>Didecyl Dithiophosphate</td>
<td>8</td>
<td>0.00321</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Anti-Bacterial</td>
<td>6942485</td>
<td>Quaternary Ammonium</td>
<td>5.5</td>
<td>0.00221</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Anti-Bacterial</td>
<td>64175</td>
<td>Ethanol</td>
<td>4</td>
<td>0.00161</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Scale Inhibitor</td>
<td>67562</td>
<td>Methanol</td>
<td>30</td>
<td>0.00352</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>25773 11/12/201</td>
<td>10000</td>
<td>Irobee</td>
<td>YGG Indus Scale Inhibitor</td>
<td>-</td>
<td>Sodium Phosphate</td>
<td>30</td>
<td>0.00352</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
e) Select “Upload CSV” link.

f) Select “Load CSV Report...” and browse to location the CSV file was saved.
Once the CSV is loaded, the system will display the information it has loaded from the CSV. This will provide an opportunity to verify that the information being submitted is correct.
h) Once the information has been verified it can be either submitted, saved or cancelled using the appropriate button.

---

2.2 Filling out a Frac Fluid report via “New Frac Fluid Report”

The “New Frac Fluid Report” link can be used to enter records individually directly into KERMIT using the following steps.

a) Log into KERMIT using an account that has been assigned the “Frac Fluid Reporting” role.
b) Navigate to the “Wells” tab and select the “New Frac Fluid report” link.

c) A “Search” screen has been provided – the applicable WA# should be entered in the field and brought into context via the “Find...” button.
d) Once the Well has been brought into context, select the “Create New Frac Fluid Report” button.
e) A data entry screen will be displayed where the following information must be entered:

- Fracture Date
- Total Water Volume
- Additive information
f) To add an additive, select the “Add Additive” button. A screen will appear where the following information should be specified:

- Trade Name
- Supplier
- Purpose
- Comments
- Ingredients

**No CAS #:** Certain ingredients may not have a CAS #, such as ‘fresh water’. In these rare cases, place a “-” (dash) in the **CAS #** column, and add a description, such as ‘fresh water’, or the term ‘Undisclosed’ in the **Ingredient Name** column. You may also leave a comment.

**Proprietary or Trade Secrets:** For any ingredient that is subject to a claim for exemption through the Hazardous Material Information Review Act, the registry number must be provided in the **Ingredient Comments** column. Furthermore, the generic name of the ingredient (ex. Organic Acid) must also be provided in the **Ingredient Name** column, where possible. Otherwise, the ingredient can be listed as ‘Undisclosed’. If the subject of the claim is solely for the chemical identity of one or more ingredients, then the CAS number(s) is/are left blank for each ingredient subject to a claim in the **CAS #** column, but the **Maximum Additive Concentration (%)** column is filled out, along with the **Maximum Fluid Concentration (%)** column for each ingredient. If the subject of the claim is to protect both the chemical identity and the concentration of one or more ingredients, then the CAS number(s) is/are left blank in...
the CAS # column along with the Maximum Additive Concentration (%) column for each ingredient subject to a claim. If possible, the Maximum Fluid Concentration (%) column can also be filled out, but may also be left blank.

Please note: The ingredient concentrations in any additive/chemical compound may add up to more than 100 per cent, as this is the maximum ingredient concentration within the additive/chemical compound.

g) If there are any issues with the submission it will appear in the Outstanding Issues portion of the page. In the example below, the “Fracture Date” is in the future and needs to be corrected.
h) To review the report in PDF format prior to submission, select the “View Report in .pdf format” button.
3 Viewing a Frac Fluid Report

Search functionality has been provided to allow users to search for either specific complete reports, or to locate an outstanding or incomplete Frac Fluid report. This search functionality can be accessed via either the “Outstanding Reports” link or “Find Reports” link.

3.1 Outstanding Reports

To find Outstanding or Incomplete Frac Fluid reports, follow the steps below:

a) Navigate to the “Wells” tab.
b) Select “Outstanding Reports” link.
c) All the outstanding Frac Fluid reports will be displayed for the company or companies to whom the logged in account has been granted access.

3.2 Finding Reports

To search for a completed or specific report, follow the steps below:

a) Navigate to the “Wells” tab
b) Select “Find reports” link
c) Specify any for the following criteria for the search:
   • Job#
   • WA#
   • Status
   • Date Range (representing the period within which a specific report was submitted)
d) All Frac Fluid reports meeting the criteria provided will be displayed for the company or companies to whom the logged in account has been granted access.

For more information or assistance with uploading your data, please log a request in our Service Desk via email (ogc.systems@bcogc.ca).
British Columbia’s Hydraulic Fracture Fluid Disclosure Requirements

FAQ

Q. Where do I submit Hydraulic Fracturing Fluid Reports?
A. Reports will only be accepted electronically. Electronic submission of Fracturing Fluid Reports are accepted via the BC Oil and Gas Commission’s (Commission) KERMIT database system: https://kermit.bcogc.ca/Login.aspx.

Q. Are submitted Hydraulic Fracturing Fluid Reports available to the public?
A. Yes, the public can search for Fracture Fluid Reports at www.fracfocus.ca and they are made available in pdf format.

Q. What are the timelines surrounding Fracture Fluid Reports?
A. Fracture Fluid Reports must be submitted within thirty days of finishing completion operations at a well.

Q. When will the submitted Fracture Fluid Report be available to the public on www.fracfocus.ca?
A. Fracture Fluid Reports will be posted to www.fracfocus.ca by the Commission immediately upon receipt.

Q. Are the Fracture Fluid Reports subject to confidentiality periods?
A. Fracture Fluid Reports are not considered “well reports or well data”, thus the information contained is not subject to confidentiality periods.

Q. What will be included in a typical Fracture Fluid Report?
A. Fracture Fluid Reports mirrors those provided by US site www.FracFocus.org, so what will be required for disclosure includes:

- Fracture Date
- Province
- Region
- Well Authorization Number
- Operator Name
- Well Name
- Longitude
- Latitude
- Long/Lat Projection
- Production Type
- Total Expected Depth
- Total Water Volume

In terms of the chemical disclosure, you will need to provide the following:

- Trade Name
- Supplier
- Purpose
- Ingredients
- Chemical Abstract Service Number (CAS #)
- Maximum ingredient concentration in additive
- Maximum ingredient concentration in HF fluid
- Volume of water with injected ingredients
- Comments, if needed
Q: What is a Hazardous Material Information Review Act (HMIRA) Claim Exemption?
A: Within Canada, any supplier who is required, pursuant to the provisions of the Hazardous Products Act, to disclose the chemical identity or concentration of any ingredient of a controlled product may, if the supplier considers such information to be confidential business information, claim an exemption from the requirement to disclose that information by filing a claim for exemption under the Hazardous Material Information Review Act (HMIRA).

Q: How is an ingredient reported that is the subject of a claim exemption through the Hazardous Material Information Review Act (HMIRA)?
A: For any ingredient that is subject to a claim for exemption through HMIRA, the registry number must be provided in the Comments. Furthermore, the generic name of the ingredient must also be provided, where possible. Otherwise, the ingredient may be listed as ‘Undisclosed’. If the subject of the claim is solely for the chemical identity of one or more ingredients, then the CAS number(s) is/are left blank for each ingredient subject to a claim, but the maximum concentration within the additive is provided, along with the maximum concentration within the fracture fluid for each ingredient. If the subject of the claim is to protect both the chemical identity and the concentration of one or more ingredients, then the CAS number(s) is/are left blank along with the concentration(s) within the additive for each ingredient subject to a claim. If possible, concentration of the ingredient within the fracture fluid can also be provided, but may also be left blank.

Q: How should an operator address a chemical with multiple names?
A: Although identical chemicals may have several names, they will have a unique CAS #, thus each ingredient has a CAS # associated with it, where practicable, to provide clear resolution as to which chemical is being referred to in the Fracture Fluid Report.

Q: What is a CAS #?
A: A CAS # is a unique identifier for chemical substances. Chemical Abstracts Service (CAS) is a division of the American Chemical Society that is responsible for the administration, quality assurance and maintenance of the CAS registry. A CAS Number itself has no inherent chemical significance but provides an unambiguous way to identify a chemical substance or molecular structure when there are many possible systematic, generic, proprietary or trivial names.

Q: Is the Fracture Fluid Report to be submitted on a per/frac basis or on a per/well basis?
A: Fracture Fluid Reports are to be submitted on a per/well basis.

Q: Will operators be notified if a well has not had a Fracture Fluid Report submitted?
A: The Commission will notify operators of non-compliance and will be working with companies to ensure that Fracture Fluid Reports are properly submitted.

Q: How should operators deal with service companies that will not provide data?
A: It is the permit holders’ obligation to provide the information.

Q: What is www.fracfocus.ca?
A: The website www.fracfocus.ca provides the general public with objective information on hydraulic fracturing, water usage and chemical use by the oil and gas industry, along with groundwater protection information. It also houses a search engine that can be initiated to locate Fracture Fluid Reports within the province of B.C.

For more information or assistance with uploading your data, please log a request in our Service Desk via email (ogc.systems@bcogc.ca).